

# Representation, Materiality and Decision Control

Essays on the Role of Board of Directors as an Intermediate Actor in  
Corporate Governance

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Jari Melgin





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**Jari Melgin**

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Board of directors has an independent and intermediate role in corporate governance. The role of board consists of two related but separate relationships, one towards shareholders and the other towards management. Shareholders delegate the majority of their powers to directors, and directors independently determine which decision rights they hold and which they further delegate to management. Boards have the challenging task of channeling a diverse collection of shareholder preferences into an organized decision-making structure that is capable of action.

This dissertation consists of four essays that investigate the distinct role of the board. The general framework for all essays arises from a Principal-representative-delegate model of governance, which can be seen as a refinement of classical agency theory. In this model, shareholders are seen as principals, board as representatives of shareholders and management as delegates or agents of directors. Board determined decision rights are used as a lens throughout the dissertation to explore board relationships, first essay building the basis for subsequent empirical analysis by investigating the concept of materiality from ex ante decision-making perspective, rather than the ex post approach of audit and legal research. Second essay focuses on representation and accountability which define the relationship between board and shareholders, arguing that in closely held companies boards act as delegates, showing face-to-face accountability towards largest shareholders, while in widely held companies they act as trustees, using independent judgment and establishing their accountability through more extensive disclosure. The third essay analyzes the determinants of division of power between directors and management finding that board decision control is independent on ownership structures, directors effectively mitigating horizontal agency problems. However, duality of CEO/Chairman roles reduces board powers, suggesting that traces of vertical problem still remain. The final essay investigates what happens to the role of the board in situations of financial distress, where creditor interests surpass those of shareholders, discussing the role of directors in controlling the potential moral hazard when most of the financial risk falls on creditors.

The dissertation is the first study systematically investigating matters reserved to the board through collecting and analyzing board rules and decision thresholds as determined by directors in 600 largest European companies by market capitalization. This hand-picked material provides novel data for understanding board's role as the epicenter of corporate decision-making, and opens up new avenues for understanding what boards actually do by

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Writing a doctoral dissertation has been a fantastic journey. I had doubts in the beginning if returning to my academic roots would be possible, if years in the operative corporate world had molded time-constrained working habits and execution-oriented thinking models in a way that would endanger the long-term rigor required from academic work. However, this journey proved to be both successful and also rewarding, providing the opportunity not only to dive into a fascinating subject in depth, but providing also an intellectually stimulating, curious and forthcoming society at Aalto University. Considering that the research project has been complemented by extensive lecturing both with our brilliant students and at Aalto Executive Education, I have enjoyed every day of this process, even the ones of desperation when progress was very slow and mental resources were depleted.

This project would not have been possible without major contribution from a number of people. First and foremost, I wish to thank my supervisor, Seppo Ikäheimo, whom I had learned to know years ago in Finnish forests, several time sharing a tent and a common orienteering team in all-night Jukola relay. Seppo is not only an excellent and competitive sportsman but an effective and supportive academic, who made this whole project possible. We did not get lost in the woods, and we found our waypoints together also in this dissertation. I would also like to express my gratitude to my pre-examiners, Morten Huse and Eduardo Schiehl, both of whom did a throughout review and provided very helpful comments improving the quality of my dissertation. I am also honored to have Morten to accept the additional task of acting as my opponent.

I started this project by interviewing numerous people with deep knowledge and extensive experience of board work. These interviews assisted me in formulating the original research questions and I received continued support from several key discussion partners throughout the process, of whom I would like to specially mention Eeva Ahdekivi, Jukka Ruuska and Thomas Ehrnrooth. My warmest thanks to all of you, I sincerely hope that this work will have practical relevance and help us all in our common societal responsibility to improve the way our companies are governed.

However, the most important support for this dissertation arose from the academic community, both within the Department of Accounting at Aalto University as well as in various academic conferences where I presented earlier versions of the four essays in this dissertation. The intellectual support and encouragement from the key people at our department, Teemu Malmi, Juha Kinnunen, Juhani Vaivio and Lasse Niemi was unwaivering throughout these four years, and I also wish to give my special thanks to my closest partners on the teaching front, Katja Kolehmainen, Olli-Pekka Lumijärvi, Jari Huikku and Tapani Kyykkänen, who have made the

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Helsinki, April 17, 2016

*Jari Melgin*







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## **PART II: THE ORIGINAL ESSAYS**

### **Essay 1 ..... 77**

Melgin, Jari (2015). Materiality in Corporate Governance

An earlier version of this paper was presented in the 7<sup>th</sup> Conference on Performance Measurement and Management Control, Barcelona, Spain, September 18-20, 2013.

### **Essay 2 ..... 119**

Melgin, Jari (2015). Representation, Accountability and Disclosure – A Principal-Representative-Delegate Model of Corporate Governance

This essay was presented in the EAA Talent workshop, Madrid, November 6.-7. 2015.

### **Essay 3 ..... 163**

Melgin, Jari (2015). Power and Decision Control

An earlier version of this paper was presented in the 37<sup>th</sup> Annual Congress of the EAA in Tallinn, May 2014.

### **Essay 4..... 205**

Melgin, Jari (2015). Corporate Governance in Financial Distress – Board Decision Rules and the Third Agency Problem

An earlier version of this paper was presented in Accounting Doctoral Tutorial, 21.-22.August 2014, Sannäs, Finland.





## **PART I: DISSERTATION OVERVIEW**





# **1. Introduction**

This dissertation investigates the role of board as an intermediate actor in corporate governance. In any complex situation involving a large number of interested parties with diverse interests, an intermediate actor is necessary to channel the multitude of preferences into unitary decision-making structure that is capable of action (Rehfeld 2006, 2009, Mansbridge 2003, 2011). Besides companies, such actors can be found in state, church or other large non-governmental organizations (Pitkin 1967). However, this dissertation in accounting focuses on corporate boards and specifically their roles in large, publicly listed companies in Europe.

There are four essays in this dissertation. The dissertation begins with a conceptual and descriptive analysis on materiality, which is investigated from *ex ante* decision-making perspective in corporate governance, in contrast to audit and legal literature focusing on *ex post* assessment of materiality of misstatements. The second essay focuses on the relationship between shareholders and board, applying theory of representation, asking in what kind of circumstances boards act as trustees and when as delegates of shareholders. The third essay investigates the boundaries of decision-making power between board and management, questioning what determines how boards sets limits of power. In the final essay, the impact of financial distress on governance is analyzed, asking what happens to the role of board in decision control when major part of financial risk shifts from shareholders to creditors.

This dissertation is based on a refined agency model of governance, where governance is seen as a triangle, consisting of two closely related but separate relationships, one between shareholders and board, based on representation and accountability, forming the basis of second essay, and another between board and management, characterized by delegation and control, being the framework for the third essay. The third side of the

triangle is the relationship between management and shareholders, which is primarily one-directional, consisting of economic outcomes of actual business operations belonging to shareholders. This model can be called principal-representative-delegate model of governance. It complements existing agency theory by demonstrating that the simplified dualistic owner-manager model lacks the sophistication required to understand the distinct role of the board and separate characteristics of its two main governance relationships, between directors and shareholders and between directors and management. It does not argue, though, that principal-agent model is irrelevant, rather it argues that it benefits from further refinements, such as presented in this study.

Analysis of the three core actors of the governance triangle build up on extensive past work on shareholders, boards and management, well described in fundamental works on corporate governance, such as Monks and Minow (2011) or, in the case of boards, being the main subject of this dissertation, extensively presented in Huse (2007). The challenge of corporate governance is how the actors in the triangle lead to value creation for a corporation (Huse 2007). Although shareholders have the legal rights of control, in the case of large publicly held companies being the focus of this study, expression of property rights is complicated by co-determination problem (Huse 2007). Property rights theory separates ownership rights from control rights, which is essentially the basis of governance triangle, where shareholders have ultimate ownership rights, but they have delegated the vast majority of their control rights to their elected representatives, the board, which further delegates decision rights to management in order to be able to carry out the daily tasks of managing a company. Solving a co-determination problem between various interests, risk preferences and time horizons of shareholders requires a mechanism of creating a unitary decision-making structure, which is capable of action.

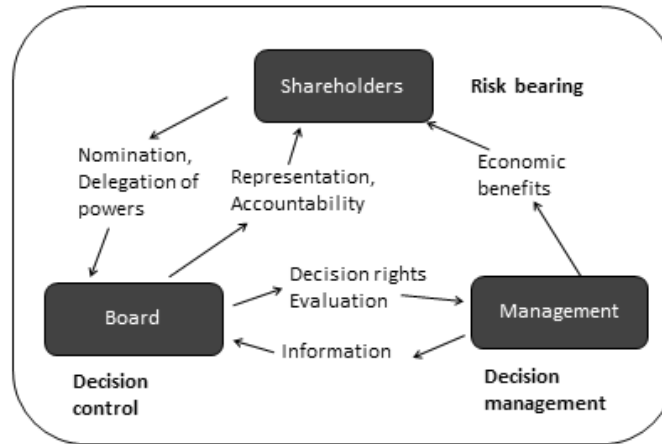


Chart 1

Governance triangle

The triangular concepts are presented in the essays in the following way: The first essay establishes the concept of materiality in decision-making, which forms the basis of the empirical analysis in the following three essays. The second essay discusses the relationship between shareholders and management, utilizing the concepts of representation and accountability and the third essay investigates the second main leg of the triangle, delegation of decision rights from the board to the management. The final essay analyzes the specific situation of the triangle where creditors assume the role of risk bearers, in situations of financial distress, and where board increasingly becomes a representative of debt holders rather than shareholders.

Even though the central actor of this study, the board, seems like a self-evident concept, it has different forms in various national institutional settings. Governance scholars regularly separate US and UK board structures from the rest of the world (see e.g. Monks and Minow 2011, Aguilera and Jackson 2003), being based on dispersed ownership and independent majorities of boards, although these two also have major differences. In US, board election is dominated by existing board and shareholders have restricted legal rights in nominating board candidates

(Bainbridge 2010, Bebhuck 2013) and duality of leadership (CEO and Chairman of the Board) is still common in US. In UK, however, boards have separated the two roles, and a distinct feature is that management commonly has several seats, constituting on average 26 % of board seats in the 180 UK companies being a part of this study. In continental Europe separation of management and board is more strict, although duality of leadership still exists, even if recommendations advice against it, in some countries. Legal scholars also differentiate between one-tier and two-tier board structures (Hopt 2011), one-tier being the prevalent form in most legislations. In one-tier system shareholders directly elect the board, which has the task of representing shareholder interests and controlling the management. In dual board structures, shareholders elect a supervisory board which further elects a management board. This structure is mandatory in Germany and allowed in many other European countries (Hopt 2011). However, the difference is more formal than real, supervisory boards having similar powers to regular boards of directors and management boards having a role closely in line with normal management teams. The German governance model also includes a legally defined executive board, which has a role similar to management teams.

In order to add for confusion, structures including both supervisory board and board of directors in the same company exist, such as at Gjensidige Forsikring in Norway, which has a 21 member supervisory board elected by shareholders, further electing a board of directors which has most of the standard board powers. These structures often have roots in mutual or co-operative ownership arrangements that have transformed themselves into listed companies. In addition there are other types of entities call boards with limited or specific governance roles, such as board of representatives with a role of supervising board of directors in Sturebrand AS in Norway, or shareholders' nominating boards with a formal role for to assess board performance and propose board members for election in shareholders' meeting. For example, BE Group in Sweden has a nominating board consisting of representatives of three largest shareholders and chairman of the board, who have the task of proposing board members, their compensation and statutory auditor for the annual shareholders meeting, and in addition they publish their assessment of directors prior to such

meeting<sup>1</sup>. However, despite technical differences between one-tier and two-tier board structures, between supervisory boards and boards of directors, between executive boards and management teams, what is called as *board* in this dissertation essentially is *a representative body elected by shareholders that has wide delegated powers and a hierarchal position over the management*.

It can be questioned if institutional differences between various legal forms of corporate governance impact the reliability of the results of this study. It is evident that a legally required executive board may be more powerful than a normal management team, and an elected body between shareholders and board of directors, such as supervisory board or shareholder nomination board may impact the relationship between boards and shareholders. It is also evident that a German board structure with mandated employee representation or UK board with a strong management influence may have a different dynamics from what can be considered a standard representative European model of unitary board with a majority of independent directors. However, boards as defined above have the essential task of decision control, being bodies that determine what kind of powers management has, and which decisions need to be subject to shareholder representative assessment. Thus from corporate governance perspective, the various other entities called boards in European circumstances have only a complementary role over the key issues of governance, decision control and accountability, as discussed throughout this dissertation.

This dissertation discusses two most important axis of the triangle, the relationship between shareholders and board and the relationship between board and management. The third axis is basically one-directional, the outcome of management actions belonging to shareholders as the residual beneficiaries. Although in certain situations a bi-directional link between shareholders and management also exists (see e.g. Becht et al. 2010), the regular route is through the board. In addition, this dissertation also discusses a specific case of board relationship towards an external party, creditors, which primarily arises in a situation of distress.

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<sup>1</sup> [http://investors.begroup.com/?p=cg&s=election\\_committee&afw\\_lang=en](http://investors.begroup.com/?p=cg&s=election_committee&afw_lang=en), accessed 24.8.2015. Shareholders nominating board would require further research, as it contributes to representation and accountability by formalizing board search and assessment processes.

The fundamental rationale for existence of a board structure arises from economies of decision-making (Hansman and Kraakman 2004). It would be impractical and costly for a large number of shareholders to participate in corporate decision-making, so some kind of delegation to a smaller group of actors is necessary (Fama and Jensen 1983). Directors can be seen as decision experts, who should have suitable knowledge to act on behalf of shareholders in complex decision-making situations, avoiding what Arendt (1973) calls the rule of mob, decisions by the most vocal shareholders. Moreover, in order for boards to efficient decision-making bodies, they need to have a proper governance process.

This dissertation follows Pettigrew (1992) and Forbes and Milliken (1999), who urged researchers to focus on what board does rather than attempting to find a connection between board structure and firm performance. A large body of literature has focused on board's influence on financial results (see e.g. Dalton & Dalton, 2005; Dalton, Daily, Ellstrand, & Johnson, 1998, Minichilli et al., 2012), however, this study considers corporate performance such a complex phenomenon with a very large number of determinants that establishment of an empirical link between board characteristics and financial results is tentative at best, and might be even misleading at worst. Instead, in line with Forbes & Milliken (1999), and Ees, Gabrielson and Huse (2009), this research contributes to the literature attempting to understanding what board actually does and how directors advance corporate goals to their best understanding.

The empirical material for all four essays consists of large publicly listed companies in Europe. International corporate governance research is mainly based on comparisons across countries (e.g. LaPorta et al 2002, Faccio and Lang 2002, for a survey, see Dennis and McConnell 2003), but considering the high level of integration of financial markets, and more specifically, free movement of capital in European Union<sup>2</sup>, the relevance of country-based studies can be challenged. Large publicly listed companies may have a legal domicile, but due to their international ownership, multinational operations and multicultural leadership, their real domicile is

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<sup>2</sup> The empirical material actually includes two countries that are not members of European Union, Switzerland and Norway, but which belong to European Economic Area, the rules of which de-facto harmonize their regulatory environment with EU. EU and EEA are used concurrently throughout the dissertation.

not tied to a single country. This observation is the basis of methodological choice for the empirical part of this work, focusing on companies at the European Union level, with little consideration for their legal domicile or place of primary stock market listing. Country-based legal or regulatory environments are not irrelevant, but separating real decision-making from formal legalistic structures requires elevating the level of analysis from territorial entities called nation-states to an European level, where integrated accounting rules based on IFRS and common regulatory framework established by European Union provide a reasonably level playing field for companies fighting for investor attention in financial markets.

This is the first research systematically investigating board rules in corporate governance. Although the responsibility for drafting and/or approving rules is not always explicitly expressed in rules, there was no evidence in any of the material of investigated 600 companies that such rules would be subject to shareholder acceptance or even presentation in shareholder meetings. Rather, several rules included even a specific date when boards had approved them. The majority of investigated European companies disclose either their full internal board rules or essential parts thereof, which provides unique information for empirical analysis which is not available in any databases. The empirical material is based on 600 largest European publicly listed companies by market capitalization as of 25.8.2012<sup>3</sup>. This creates two major limitations to the results; they may not be globally applicable, nor may they be relevant for smaller or private companies. However, the sample is economically significant. The total turnover of these companies in 2011/12 was over 8 trillion Euros, and their market capitalization was in excess of 6 trillion Euros. These companies originate from 17 countries and represent 19 industries, and thus provide a reasonable image of European corporate sector. As all of them are publicly listed and widely held, they reflect well firms' ownership structure in Europe. The shares of these companies are listed in countries belonging to European Union, and thus follow the relevant directives<sup>4</sup>, creating a reasonably uniform institutional framework

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<sup>3</sup> EuroSTOXX 600 as of 25.8.2012

<sup>4</sup> Such as [Directive 2007/36/EC](#), which sets certain rights for shareholders in listed companies and [Recommendation 2005/162/EC](#), which deals with the role of non-executive or supervisory directors in listed companies as adopted by national authorities or [Directive 2004/109/EC](#) and its amendment 2013/50/EU

for the analysis. Essentially, this is a study of governance and role of board in European circumstances.

## **2. Objectives**

This section summarizes the research objectives of the dissertation. The primary objective of this dissertation is to contribute to the literature by separating the dualistic agency model of governance into a more refined model which sees governance as a triangle, consisting of separate and distinct relationships between shareholders and the board and board and the management. The conceptual analysis is supported by empirical work on 600 largest European companies by market capitalization, which investigates the role of board in corporate governance not only in relation to other two key internal actors, shareholders and, management, but also in relation to creditors, in situations of distress. This dissertation presents the first systematic research on board rules, which provide rich data on how corporate governance and decision-making related thereto is organized in companies. In addition, this material opens up a novel approach to one of the key concepts in accounting, materiality, studying it from ex ante perspective of what determines a material decision.

A second objective of this dissertation is to clarify existing concepts and introduce new concepts into literature on corporate governance. The first of such concepts is materiality, introduced in the first essay, and focusing on a previously unexplored ex ante measurement of what constitutes a material decision. The second is representation, discussed in the second essay, and several useful concepts from the political theory of representation are introduced into the analysis of relationship between shareholders and boards. The third chapter builds up on a formal definition of power in corporations, a concept commonly used but seldom rigorously defined in literature. In the final essay no new concepts as such are introduced, but it extends the concept of representation by considering the abnormal situations of financial distress and what happens to the role of the board when most of the financial risk lies with the creditors.

The research objectives of each of the four essays constituting this dissertation will be summarized in the following:



Essay 1 seeks to advance our understanding on concept of materiality by investigating what constitutes a material decision in corporate governance. It lays the basis for the dissertation as board decision thresholds are instrumental tools of analysis in the three following essays, forming the core of the dissertation. Materiality is analyzed from two perspectives, depth and width, depth referring to levels of decision thresholds as determined by boards while width refers to the scope of matters subject to hierarchical decision control. This *ex ante* approach complements extant literature in audit and legal (Eilifsen and Messier 2015, Booth 2013, Chong and Vienten 1994, Messier and Eilifsen 2005), which has an *ex post* perspective and which asks what constitutes a material misstatement or omission of fact in financial disclosures.

Essay 2 seeks to provide new insights to the relationship between shareholders and board, arguing that boards act as an intermediate actor with a distinct role in governance, and that postulates of classical agency theory do not fit well the relationship between owners and directors. In order to better understand the relationship, this essay introduces theory of representation (Pitkin 1967, Mansbridge 2003 and 2011 and Rehfeld 2006 and 2009) into literature of corporate governance. In addition, the essay integrates theory of representation with theories of accountability (Tetlock 1983, Tetlock et al. 2013, Roberts 1991, Roberts, McNulty and Stiles 2005) and theories of disclosure (Verrecchia 1983, 2001, Leuz and Wysocki 2008) into governance research.

Essay 3 seeks to contribute to the literature on corporate governance by investigating the relationship between board and management through concepts of power, decision control and delegation. Although direct mechanisms of shareholder influence exist, the most regular route in large publicly listed companies is through elected representatives of shareholders, the board. Through empirical analysis this essay investigates the determinants of decision control, how power over material decisions is split between board and management. It provides new insights into classical horizontal (Jensen and Meckling 1976) and vertical (Shleifer and Vishny 1997) agency problems by studying the role of the board in mitigating these issues.

Finally, Essay 4 seeks to contribute to governance literature by investigating the third agency problem, the one between the company and its creditors. It integrates concepts from financial contracting theories into corporate governance, and the essay seeks to establish how governance mechanisms and more specifically decision control changes in situations of distress, and how board limits the potential moral hazard of shareholders, transforming itself

from representatives of shareholders to representatives of creditors. This paper also attempts to contribute to literature on covenants, formalizing the conflicting risk preferences of shareholders and creditors, and how covenants are set in order to safeguard creditors from the moral hazard of shareholders.

## **3. Theoretical underpinnings**

### **3.1 Definition of corporate governance**

Corporate governance is a subject that excites researchers from various fields. Contributions arise from literature in accounting, finance, management and law, and there are links to research on organizations, behavioral decision-making and economics. It can also be argued that corporate governance is only a subset of a general concept of governance, how people arrange decision-making in entities consisting of a large number of interested parties, managed by a few, based on delegated authority. This literature opens avenues to the long tradition of political science and even political philosophy. From researcher's perspective, multitude of approaches provides a rich basis of ideas how to approach his problem, however, this same multitude provides a muddy field, where it is a must to choose the conceptual environment, at the same time confessing that numerous fruitful avenues will not be considered.

The lack of a clear single theoretical basis for this work is somewhat problematic for the dissertation. However, this is not uncommon in accounting research, as discussed in chapter 3.2. below. This dissertation attempts to combine two large traditions of social research, the well-established representation theory from political science with the agency theory, which is still the dominant, although frequently attacked theory of corporate governance. This being a dissertation in accounting, a natural reference point is to position this work in relation to agency theory, and thus the main theoretical underpinning is to see this work as a refinement of classical agency theory and not as an attempt to replace it with a more general theory of representation. Various other alternatives to theoretical

underpinnings could also be explored, such as behavioral theories of management (e.g. Kahneman and Tversky 1979, Huse et al 2011), institutional theories of action (e.g. Ocasio 1999), decision-making theories in organizations (Forbes and Milliken 1999, Fama and Jensen 1983, Simon 1955) or alternatives to agency theory such as stewardship theory (Davis, Schoorman and Donaldson 1997), stakeholder theory (Hill and Jones 1992) or resource dependency theory (Hillman and Daziel 2003). These theoretical approaches are further discussed later in this chapter.

There are numerous definitions of corporate governance, reflecting the academic background or research focus of the authors. Probably the most widely used is Shleifer and Vishny's (1997) definition, according to which "Corporate governance deals with the ways in which suppliers of finance to corporations assure themselves of getting a return on their investment". Their approach sees governance as essentially guaranteeing the premises for well-functioning financial markets, and it does not differentiate shareholders from creditors. More formalistic is Gillan and Stark's (1998) definition of governance as "A system of laws, rules, and factors that control operations at a company", which considers governance as a structure separate from its economic significance. Armstrong et al. (2010) have a procedural view, seeing governance as "the set of contracts that help align the actions of managers with the interests of shareholders". Their definition is in line with the classical agency-theoretic work by Jensen and Meckling (1976), which considers a company as a nexus of contracts and where governance is a mechanism of controlling agency problems of stealing and shirking by the management. Moreover, Armstrong et al (2010) further specify governance in a way that resembles the triangular approach of this dissertation: "Corporate governance consists of the mechanisms by which the shareholders ensure that the board of directors, in turn, sees to it that managers' interests are aligned with those of shareholders." Huse (2007, p.4) takes a behavioral perspective and sees value creation as the overall aim of governance, defining corporate governance as "the interactions between coalitions of internal actors, external actors and the board members in directing a corporation for value creation". Definitions from political science are also relevant, as governance can be seen as a problem encountered by all human entities consisting of a large number of interested parties, represented by a few. Accordingly, Keohane and Nye (2002, p 202) define

governance as “the process and institutions, both formal and informal, that guide and restrain the collective activities of a group”.

For the purposes of this dissertation, *corporate governance (in large publicly listed companies) is defined as a mechanism of translating an unorganized multitude of shareholder preferences into an organized decision-making structure, which is capable of action.* Benefits of this definition arise from realization that the starting point of governance is complex – publicly listed companies are owned by a large number of different types of shareholders, whose risk preferences and time horizons are diverse (Becht Bolton Röell 2005, Thomsen and Pedersen 2000, Sur, Lvina and Magnan 2013, Fama and Jensen 1985, Anderson et al. 2003). Most of the aforementioned definitions assume a unitary goal of shareholder value maximization as the target of governance, without consideration what is the process to determine how to reach this mythical goal. In reality, shareholders hold the ultimate power in corporations, but in order to solve their collective action problem they delegate the vast majority of their powers to their elected representatives, board of directors. Directors further determine which issues are material enough requiring board involvement and which can be further delegated to the operative management. This two-step mechanism of representation and delegation is the essence of governance. A board bypassing material decisions or using resources for matters irrelevant to shareholders misuses its powers. Thus the question of materiality arises as a core determinant of board efficiency – the time and resources available to board work are restricted, and if boards are not able to focus on material issues, their ability to represent shareholder interests is limited.

A clear limitation of this study is that while focusing on governance as a decision-making process, it does not attempt to enter into the behavioral traits of corporate bodies. The theoretical bridge linking rules of decision-making to actual board behavior is still missing, and this dissertation does not answer the question if and how frameworks of control impact actual decisions or their outcomes. If we see companies as entities targeting long term value creation and governance as a system of determining “who and what really counts” (Huse 2007), decision rules are a means of approaching this target, although they do not imply that quality of decision-making processes would lead to better outcomes.

Philosophy, Socrates, is a pleasant pastime, if one engages in it with moderation, at the right time of life; but if one pursues it further than one should it will bring ruin. However naturally gifted a person may be, if he studies philosophy beyond a suitable age he will not have acquired the necessary experience to be thought a gentleman and a person worthy of respect. People of this sort have no knowledge of the laws of their city, and of the language to be employed in dealings with men in private or public business, or of the human pleasures and passions; in a word, they have no idea at all how others behave. So when they are involved in any public or private matter they are as ridiculous as I imagine men of affairs to be when they meddle with your pursuits and discussions (Gorgias, Callicles speaking).

The quote from Plato's *Gorgias*, Callicles arguing with Sokrates (Plato 380 BC/2004) on the relationship between science ("philosophy") and practice, beautifully summarizes the basic dilemma of applied social sciences. Is science just a "pleasant pastime" with little impact on reality, of "how others behave", or can it provide us with real knowledge of people and societies? Although pompous, Callicles's argument is a good reminder of relevance of practical value of research in social sciences.

A discussion of the theoretical foundations of this dissertation requires taking a stand on definition on what actually is a theory, specifically what concerns corporate governance and the board. Being a work within accounting research, primary reference point arises from this field. The mainstream of research in financial and management accounting, seems to take a practical view on theories. Scott (2012, p 23) in his textbook definition sees that "the fundamental problem of financial accounting theory is how to design and implement concepts and standards that best combine the investor-informing and manager performance-evaluating roles for accounting information". His definition is clearly inclusive of governance research, board being the body responsible both for "investor-informing", i.e. disclosure, and management performance evaluation. Watts and Zimmerman (1979), usually credited as the founders of positive accounting theory, provide a wide definition: "We would prefer to reserve the term "theory" for principles advanced to explain a set of phenomena, in particular for sets of hypothesis that have been confirmed [...] However, in this article

we use the word “theory” as a generic term for the existing accounting literature.” Moreover, Malmi and Granlund (2009) define theory in management accounting simply as something that has practical value. Thus it seems that accounting scholars have not only a practical view of theories, but almost a *laissez-faire* view, anything that is useful in furthering our understanding of societal phenomena under research can be called theory, further deliberations on the concept being left for the philosophers of science.

However, accounting and corporate governance literature is full of theories. Positivist approach attempts to find theories that can create testable predictions that reliably forecast future events (Friedman 1953). Accounting theory claims to have evolved from normative theories, how things should be, to positive theories, understanding how things are (Ball and Brown 1968), although the controlling role of accounting information inherently includes a normative aspect by definition<sup>5</sup>. Accounting and corporate governance theories are strongly influenced by general economic theories, core concepts such as utility maximization and rational but selfish behavior providing tools for elegant mathematical models suitable for theoretical analysis. On the other hand, a relevant challenge to the rationalist roots of economics in corporate governance studies arises from behavioral theories (Ees, Gabrielson and Huse 2009). Simon (1955), argued that people have only bounded rationality, and that they rather satisfy than maximize, complemented by Tversky and Kahneman (1974) and Kahneman and Tversky (1979), who approach decision-making from behavioral psychology, proving that human decision-making is not rational but can better be explained by concepts from prospect theory, such as loss avoidance or anchoring. This demarcation line between formal economic theory and behaviorism is probably still the main line dividing theoretical work in corporate governance.

It seems like theory in accounting is a versatile term, but do all interesting phenomena actually require a theory of their own? Does a study on boards actually require a theory for the board? We do not have a theory of shareholders, although we have plenty of theories on equity markets. This

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<sup>5</sup> For example, global International Financial Reporting Standards (IFRS) are based on a normative target of “decision usefulness”, which can be considered as a strong encouragement for practice-based research.

dissertation takes a view that board is an entity that has a unique organizational role, but it cannot be analyzed detached from its environment. Theories on boards must be relationship based, discussing how boards interact with their environments, consisting of other parties not only internal to company, but also parties normally associated with stakeholder theory, creditors, employees, regulators, markets and media. This external view of boards work has also restrictions. It does not consider board internal dynamics, applying theories of how people make decisions as teams of directors, interacting with each other and with the management. These theories may provide the micro-foundations of board research, and the link between internal and external aspects of governance is still clearly underdeveloped.

A theory includes always choices, assumptions that some factors are more important than others (Waltz 1979). However well founded in observations or prior research, such choices are always subjective and thus open to criticism. In social sciences, no phenomena is detached from its environment, and it is impossible to consider all such factors in understanding and explaining phenomena. Any theory requires simplification, and as discussed in chapter 4, such choices may materially impact both validity and reliability of results. Positivists argue that simplification and even unrealistic assumptions do not matter, as long as the theory provides reliable predictions of consequences from well-defined prior conditions (Watts and Zimmerman 1990). In the related field of politics, Waltz (1979) suggests that explanation rather than prediction is expected from a good social science theory, since social scientists cannot run controlled experiments that give the natural sciences so much predictive power.

Besides choices, theories are not immune to values (Watts and Zimmerman 1979). A majority of governance research seems to be followers of Callicles, who further argued to Socrates "That is exactly what I do mean. My belief is that natural right consists in the better and wiser man ruling over his inferiors and having the lion's share." Plato (380 BC/2004). Similarly, Malmi and Granlund (2009) argue that although value-free research may be an ideal, in reality most of researchers take economic efficiency as their inherent goal, which as such is clearly a normative goal. Fundamentally, all researchers are human beings, limited by their education, personal

experiences, values and their own comprehension of language and thus cannot totally externalize value judgments from their analysis (cf. Burrell and Morgan 1979).

Finally, Watts and Zimmerman (1979) raise a moral question and ask if the target of theory should be economic efficiency or protection of the weakest. This question is related to Rawls' theory of justice (1976), and traits of this strongly normative position on theory can be found from regulation of corporate governance – what else is regulated disclosure but protection of the weakest, attempts to provide as level playing field for all investors as possible, and moreover, what else is the requirement for independent majorities in board but a normative answer against excessive powers of dominant shareholders.

### **3.3 Theories of corporate governance**

The big elephant in glass house in governance literature is agency theory. Its roots from Adam Smith (1776) via Berle and Means (1932), Coase (1937), Jensen and Meckling (1976), Fama and Jensen (1983) and Shleifer and Vishny (1997) have been documented uncalculated many times, and its concepts of separation of ownership and control, agency problems of stealing and shirking and its solutions of carrot and stick, alignment of interests and threats of sanctions form the basis of an enormous literature non only in corporate governance but in several adjoining fields of study. Despite criticism for the simplistic behavioral assumptions of agency theory (Huse et al. 2011, Pepper and Gore 2012, Ghoshal 2005) and inconsistent empirical results (Daily Dalton and Canella 2003, Aguilera et al. 2008), agency theory is still the dominant theory explaining human behavior in hierarchical organizations (Dalton et al 2007)

The concept of shareholder supremacy forms the philosophical basis of agency theory. It sees shareholders as the ultimate beneficiaries, the interests of which overrule the interest of all other actors. It does not normally question the complexity of the web of interactions between various actors and multiplicity of shareholder interests. *Standard agency theory* arises from delegation through contract. A principal enters into a



contractual relationship with an agent, agreeing that agent will perform agreed tasks on principal's behalf. This leads to two problems, how to ensure that the goals of the principal and agent are in alignment, and how to ensure that the agent is actually doing what he is supposed to do (Eisenhardt 1989). Jensen and Meckling (1976) saw three different types of costs arising from agency relationships, costs of incentives, control costs and residual loss. In order to ensure that agent works in line with principal's interests, he should be compensated if the results of his work are in accordance with the original contract. On the other hand, agency theory sees people unreliable, and thus control is also required. Controlling agents through mechanisms such as audit, board of directors and public disclosure entails costs of agency relationship. The third set of costs is more opaque, as it assumes that some of agents decisions diverge from maximization of principal's wealth, causing residual losses. This view fails to consider the potential benefits of delegation, agents providing skills that principals do not have, creating added value to shareholders through their contractual relationship.

Shleifer and Vishny (1997) argued that in addition to *vertical agency problem* between shareholders and management, differing interests of large and small shareholders create another, *horizontal agency problem*. They argued that dominant shareholders can influence corporate decision-making to the detriment of minority shareholders, either directly expropriating benefits from firms through channeling of funds through various contractual means, or indirectly by influencing corporate decision-making prioritizing their preferences, which may materially differ from the majority of interests of diversified minority shareholder base<sup>6</sup>. In this situation management becomes agents of only some shareholders, not all of them.

In addition to vertical and horizontal agency problems, the relationship between the company and its creditors is sometimes called the *third agency problem* (Armour, Hansmann and Kraakman 2009), a concept used in the fourth essay of this dissertation. As the role of principal moves from shareholders to creditors in situations of distress, it also impacts the way

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<sup>6</sup> Shleifer and Vishny's paper has an interesting historical connection. They wrote the paper after Andrei Shleifer had worked in his native Russia together in a team including Robert Vishny, on privatizing companies in Russia after the collapse of Soviet Union. It is evident that their comments on dominant shareholders misusing their rights was heavily influenced by what they encountered in Russia.

boards and management act, essentially changing the role of a board from representative of shareholders to representative of creditors, in line with the change in split of risk between various providers of funds, as discussed in the fourth essay.

Agency theory is very close to being a generic theory of organized human behavior. Its intuitive appeal arises from behavioral traits common to all of us – how to motivate children. Threats, extortion and bribes; incentives and control are parent-child relationships' adult adaption. Agency theory is also such a multifaceted theory that almost any behavior can be explained by it. In its classical format, it assumes self-interested management, whose sole target is to maximize its own wealth using corporate assets. On the other hand, e.g. Fama (1980) and Pepper and Gore (2012) recognized that directors' and managers' self-interest may be based on reputational capital rather than personal wealth, motivation arising from benefits that cannot be measured financially. Thus agency theory can predict both financially and non-financially motivated behavior, which protects it from empirical challenges, as almost any behavior can be explained by either extrinsic or intrinsic motivation.

Basic agency model has remained intact as a theoretical concept, although additions, such as seeing governance as a set of multiple agency relationships, extending over the boundaries of a firm (Arthurs et al 2008), or behavioral agency theory integrating prospect theory and other more realistic behavioral assumptions to theory, have clearly contributed to our understanding of agency relationships. For example, behavioral agency theory assumes that people have bounded rationality, allows for variations in risk preferences, and considers trade-offs people make between extrinsic and intrinsic motivation (Pepper and Gore 2012).

Critics of agency theory have argued that it is under-contextualized and unable to explain the governance relationships in different stages of corporate lifecycle, different institutional settings or different environments companies may encounter (Aguilera and Jackson 2003). Aguilera et al. (2008) criticize the universal nature of agency theory, and argue that contingency approach to organizations would better cover the very different institutional, evolutionary and cultural situations companies encounter, calling for a *bundle approach* to governance research. Similarly to Pepper

and Gore (2012), Ees, Gabrielson and Huse (2009), focusing specifically on board of directors, search for alternative concepts for research on board behavior. They argue that instead of classic agency elements of conflict of interest, exploitation and distribution of value, researchers should focus on co-ordination, exploration and knowledge creation.

Challenges to agency theory are not few. Lack of empirical support to hypothesis based on agency theory (Daily, Dalton and Canella 2003) have led to search for alternative approaches. Stewardship theory (Davis, Schoorman and Connelly et al. 1997) argues that the behavioral assumptions of selfish, profit maximizing individuals are not correct, rather people enjoy personal utility from collectivist behavior giving higher value to co-operation than conflict, in essence arguing that intrinsic motivation can be stronger than pure extrinsic motivation. Stewardship theory is connected to stakeholder approach, which assumes that in the conflicting environment of constituencies with contrasting interests, people will make choices they consider to be in the best interests of all stakeholders, not only company shareholders (Davis, Schoorman and Donaldson 1997). Resource dependency theory treats governance structures as complementary to each other, e.g. boards providing resources that managements do not have (Hillman and Dalziel 2003). Behavioral approach sees governance as a system of interactions between various actors influencing corporate decision-making, reducing the owner-manager problem to just one of the several relations influencing corporate governance (Huse 2007). Probably the most elegant criticism of agency theory arises indirectly from Ghoshal (2005), who sees the theory impacting reality, and agency theory being based on selfishness as a motive and carrot and stick as tools provides a dismal influence on current and future generations of managers. If the only way of controlling the selfish behavior of top management in companies is through a mixture of control and incentives, we inherently teach our students and our managers that selfishness is the expected mode of behavior when they rise to higher echelons of the society.

### **3.4. Theories on boards**

Since direction over the activities of a corporation is exercised through the board of directors, we may say for practical purposes that control lies in the hands of the individual or group who have the actual power to select the board of directors, (or its majority), either by mobilizing the legal right to choose them—"controlling" a majority of the votes directly or through some legal device—or by exerting pressure which influences their choice. Occasionally a measure of control is exercised not through the selection of directors, but through dictation to the management, as where a bank determines the policy of a corporation seriously indebted to it. In most cases, however, if one can determine who does actually have the power to select the directors, one has located the group of individuals who for practical purposes may be regarded as "the control."

Berle and Means 1932,

Although Berle and Means (1932) are usually credited for first defining the separation of ownership and control, they also considered boards as delegates of most powerful shareholders. Dominant owners exerted power through their "own" directors with little consideration for any independent role of boards. This view is in strict contrast with Mace (1971) or Lorsch and MacIver (1989), who reversed the power relationship and painted boards as "pawns" of management, with little influence on business and limited tools of controlling the very management that in practice chose their own boards. The revival of boards started in 1990's, as evidenced in Cadbury report on Corporate Governance in UK (Cadbury 1992), which became an international benchmark document for governance guidance. It recognized the potential independent role of directors, and laid the basis for the triangular model of governance found in publicly listed companies in Europe today. This changing role of directors has contributed to an explosion of board-related literature in accounting, finance, management and other related fields.

In their influential survey on research over board of directors, Adams, Hermalin and Weisbach (2010) noted that the majority of research on boards is empirical, lacking common theoretical basis. Even the more theoretical works (e.g. Adams and Ferreira 2007, Raheja 2005 and Song and Thakor 2006) could be called models of behavior in specific situations rather than theories on boards. However, do we even need a specific theory on boards? There is no commonly accepted theory of shareholders as a

group even though a vast financial literature discusses portfolio selection and impacts of ownership. Board is not a self-sufficient body, its existence is defined through its relationships, most important the ones towards shareholders and management. Pettigrew (1992) recognized the lack of a coherent theoretical approach to boards and proposed seeing them through a sociological prism of managerial elites having powers to control organizational behavior. There are theories related to boards, useful theories for understanding board behavior, but similarly to what Malmi and Granlund (2009) noticed in accounting, board research theories are mainly borrowed from other fields of study, applying them to specific situations boards encounter.

Agency theorists and practitioners often equate boards as agents of shareholders together with management (e.g. Reeb and Zhao 2013, BlackRock 2014), although postulates of agency theory only weakly apply to boards. It may be partly due to institutional and cultural set-up of the extensive the US-based research. Board election process in US is dominated by management and existing board (Sur, Lvina and Magnan 2013)<sup>7</sup>, while in Europe various forms of direct shareholder involvement in board selection have become more common (OECD 2012). Moreover, almost half of the listed US companies combined the role of Chief Executive Officer and Chairman of the Board (Conference Board 2011), while the same percentage in the European sample of this study was 13,5 %<sup>8</sup> dual structure being against recommendations in most European Union countries. Due to election process and duality of leadership, it is evident that board's role in corporate governance is somewhat different in Europa from United States and the results of a study of board's role in Europe are not fully applicable to US circumstances.

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<sup>7</sup> European and American role of directors may be different as their election processes are different. Sur, Lvina and Magnan (2013) describe the US mechanism as follows: "The director selection or appointment process occurs as follows. First, the board's nominating committee scans potential members and issues a recommendation to the full board. The Chair, who sets the agenda for board meetings, then ratifies that recommendation. Second, the full board votes on a slate of board nominees. The CEO is typically consulted in this stage. Third, the board's slate of nominees is submitted for ratification at the shareholders' meetings. Owners have various ways to intervene in this process, as directors associated with a particular owner group have a say in the work of the nominating committee."

<sup>8</sup> 81 companies out of 600. In addition, 32 companies had an ex-CEO as the chairman, or had an executive chairman, i.e. salaried by the company

Considering the dominance of agency theory, this dissertation can be seen as an addition to existing theory, even though it argues that the role of the board has only weak resemblance to the basic postulates of agency relationship. Boards have limited extrinsic financial motivation as their compensation is generally fixed. Although share ownership by directors is often recommended, or even mandated by effectively enforcing directors to purchase company shares through their compensation, financial incentives cannot be considered a dominant basis for director motivation<sup>9</sup>. Adams, Hermalin and Weisbach (2010) point out reputation as a significant motivating factor, while Ees, Gabrielson and Huse (2009) stress the role of intrinsic factors. Moreover, control as a second element of agency relationship is also only weakly present in the relationship between board and shareholders. Empirical research shows that boards very seldom are held legally accountable for corporate outcomes (Black, Cheffins and Klausner 2006), being protected by business judgment rule – as long as decisions are properly made, even bad decisions are not a basis for legal consequences. Independent audit can be seen as a control mechanism not only over management but also over board, but in effect, regular elections of board members in shareholder meetings are the main formal control mechanism available to shareholders.

Lack of explanatory power of agency characteristics calls for alternative approaches to analyzing boards in corporate governance. Probably the most general theory of boards actually arises from political science, theory of representation, which ponders the relationships between a large number of interested parties and their elected representatives, and the role of these representatives in relationship to a management or an organization they are supposed to control. Representation is a term sparsely used in corporate governance research (Verstein 2012). Classical works (e.g. Jensen and

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<sup>9</sup> Hay Group in its 2014 study of European boards found that average compensation for the chairman in their sample of 374 listed companies was 265.000 EUR in 2012 while regular directors received an average of 81.800 EUR with the vast majority paid out either in cash or equal amount in company stock (Hay 2014). Similarly, in Conference Board 2011 survey of director compensation and board practices, the average board total compensation in the surveyed 334 companies was in retail trade (USD 211.658) and while the majority of compensation was in the form of stocks, it was mainly an alternative way of compensation rather than a normal incentive, stock options accounting only for a fraction of total compensation (Conference Board 2011). Dalton, Hitt, Certo and Dalton (2007) may have misinterpreted earlier Conference Board surveys, claiming that 93 % of boards in US had stock options in 2005, probably mixing shares as mode of compensation and actual options

Meckling 1976, Fama and Jensen 1983, Eisenhardt 1989, Shleifer and Vishny 1997) do not use the word at all, and recent influential surveys (Adams, Hermalin and Weisbach 2010, Daily, Dalton and Canella 2003, Becht, Bolton and Röell 2005) either bypass the issue or refer to it in stakeholder context, questioning how structures of corporate governance represent the interests of third parties. Gompers, Ishii and Metrick (2003) provide an exception by writing “Corporations are republics. The ultimate authority rests with voters (shareholders). These voters elect representatives (directors) who delegate most decisions to bureaucrats (managers). As in any republic, the actual power-sharing relationship depends upon the specific rules of governance.”, although bypassing the question of representation and turning instead to the question of shareholder rights and corporate performance. All in all, in governance literature there is little discussion on how boards represent the interests of diverse shareholders with varying risk preferences and time horizons.

Representation theory is well developed in political science. The central question is if the role of a representative is to act on her independent judgment (Burke 1774) or on preferences of her electors (Madisson 1788). The same question can be asked in corporate governance, should directors be independent from the opinions of their electors, or should they rather represent preferences of clearly identifiable shareholders. The second essay in this dissertation applies the theory of representation (Pitkin 1967, Mansbridge 2003, 2011), arguing that representation provides the basis of governance relationship between shareholders and directors, board behavior being based on accountability rather than incentives and control. Disclosure is seen as the primary feedback of representation, and theories of accountability (Tetlock and Bottinger 1994) and disclosure (Verrecchia 2001) are integrated as building blocks of what the first essay calls principal-representative-delegate model of governance.

Another approach studying boards relates to their impact on firm governance. Is board “hands-on”, participating actively in the decision-making (Adams and Ferreira 2007, Harris and Raviv 2008) and thus having a managerial role, or are they more “supervisors”, monitoring and assessing top management rather than influencing actual issues (Hermalin and Weisbach 1998, Raheja 2005). The third essay in this dissertation investigates the same issue, arguing that at least in large publicly listed

companies in Europe boards have a managerial role, as the vast majority of disclosed board rules include specific thresholds which make boards actual decision-makers.

Theoretical underpinnings for the empirical research on managerial or supervisory role of boards can be found from theories on delegation and information gap. Harris and Raviv (2008) build a model according to which optimal delegation is a function of information gap, and show that in certain circumstances, delegation is advantageous to both parties. Aghion and Tirole (1997) further argue that we need to separate between formal and real power, both being relevant to the delegate motivation. Information gap is closely related to resource dependency theory, board members providing a skillset to a company that it is lacking, giving advice to top management on issues where internal resources might not have enough experience (Hillman and Dalziel 2003, Daily, Dalton and Canella 2003). In essence, resource dependency theory sees boards as part-time consultants providing skills that companies do not need on day-to-day basis. Resource dependency theory is also related to representation, decision experts providing what Pitkin (1967) calls substantive representation, delegation of decision power to specialists in a field.

Behavioral theories tend to focus on the motivation and actual practice of board work. Very few researchers have had access either to boardrooms or board materials. Although numerous authors have called for access to the famous “black box” of the boardroom (e.g. Daily, Dalton and Canella 2003, Beyer et al. 2010), the vast majority of studies focuses on input-output models of governance, i.e. what are the impacts of external characteristics, such as ownership or board structure, on corporate decisions or outcomes (Gabrielsson and Huse 2004, Adams, Hermalin and Weisbach 2010). Besides the abovementioned examples, it is hard to find studies that would have been able to receive direct access to primary materials of board minutes or materials, or being able to observe actual dynamics of board room. This is evidently due to what Pettigrew (1992) calls “strong norms of privacy”, in order to maintain trust and confidentiality, transparency of what happens in the boardroom is clearly not required.



### **3.5 Board research related to board rules**

There is very limited extant research that has been able to penetrate to the internal workings of a board room and even less there exists a proper theory of board process (Adams, Hermalin and Weisbach 2010). Research on board rules provides a novel contribution to this stream of research. Decision rules provide first-hand information on how boards interact with management and how directors understand their role as shareholder representatives. Although rules as such may have limited impact on actual outcomes, they open up a new avenue for understanding how boards really impact corporate decision-making.

Of the few related antecedents, Machold and Farquhar (2013) observed six boards for two years, concluding that information dissemination took excessive part from limited time for board work, and called for shifting of focus to more strategic issues, an observation in line with this dissertation, which challenges if boards in public companies actually are able to focus on issues material to shareholders. However, the applicability of Machold and Farquhar study to large publicly listed companies is limited by its small sample and four out of six boards belonging to non-profit entities.

Huse and Zattoni (2008) conducted a longitudinal study, where one of the researchers acted as a director in three small companies, documenting his observations, concluding that board role changes in different life-cycle phases of a company and that internal and external trust and perceptions of competence and integrity may be more important characteristics than formal independence of board members. Huse and Zattoni's observations challenged the standard assumption of board studies that externally observable board characteristics such as independence would be most important factors impacting board behavior. Bezemer, Nicholson and Pugliese (2014) videotaped board meetings from two companies, and in line with Huse and Zattoni, concluded that internal dynamics in board room are more important than external characteristics.

Johansson (2008) had access to board accounts, i.e. material provided to board members by the management for board meetings for a period of 10 years, in a publicly listed Swedish company. Johansson highlighted the

importance of personal trust as a decision-making criterion, as materials provided for the meetings could even be neglected if the presenter had the necessary credibility. He also noted a major discrepancy on the time used for material and immaterial issues, resource allocation being, to say the least, illogical. From the point of view of this dissertation, Johansson's work highlights the relevance of improving boards' concept of materiality, so that board work efficiency could be increased and quality of decision-making improved.

Schwartz-Ziv and Weisbach (2013) investigated board minutes of 11 Israeli companies where Israeli state held a major interest. They concluded that boards widely fall into two models, managerial, where they have a direct role in firm decision-making, and supervisory, where boards monitor management decisions but do not participate in those themselves. Similarly, in case boards disclose the rules for management decision authority, they take an active role in material decisions, acting as "management-type" boards (Song and Thakor 2006, Adams and Ferreira 2007, Harris and Raviv 2008) while boards with no clearly specified rules can take a more hands-off role of supervising and assessing management work as they are not directly accountable for specific decisions (Hermalin and Weisbach 1998, Raheja 2005). However, the results of Schwartz-Ziv and Weisbach (2013) may not be fully applicable to large public listed companies in Europe, where requirement for public accountability is higher than in smaller, state-controlled companies in Israeli circumstances.

Investigating disclosed board rules will not enter into the actual decision-making process, however, rules provide information on matters surrounding the boardroom, definitions of materiality and representation of shareholder interests, division of power between board and management and shifting of loyalty from shareholders to creditors in situations of distress. Thus research on board rules provides us a glimpse of the structure of board work, which is more extensive what traditional input-output models can provide, but which evidently lack the micro-foundations of research on actual interactions and motivations of directors and management.

## **4. Methodology, research methods and data**

### **4.1. Methodology**

This study takes a positivist methodological view, assuming that through theory-based empirical quantitative analysis, we can find relationships of social reality, which enable us to understand and explain human organizational behavior. Silverman (1993) defines methodology as a collection of choices, methods of data gathering and forms of data analysis, defining our approach to studying our subject, such as quantitative and quantitative analysis. We can also consider research philosophies as methodologies, positivism representing a methodological approach assuming that we can find statistical relationships that provide reliable predictions of future (Friedman 1953). However, the statistical results in social sciences generally need to be treated with care, as empirical material is to a major degree based on categorizations that may only roughly classify various determinants used to investigate the phenomena.

A second methodological trail relates to conceptualization. Both scientists as well as practitioners need linguistic concepts that enable us to communicate and analyze reality. This study introduces certain new concepts and brings some concepts from neighboring social sciences into analysis of governance. Even though corporates have distinct governance characteristics based on ownership, dispersion of ownership means that ownership and control have distanced from each other to the extent that general problems of representation and accountability increasingly apply also to corporate forms of governance. The extent of indirect representation is immense, considering for example that practically everybody in developed economies belongs to some kind of pension savings system, where fund managers themselves act as representatives of citizens as ultimate beneficiaries.

The third methodological choice of this dissertation is orientation towards practice. The practical relevance of this study is related to board accountability and efficiency, how directors can be better representatives of shareholder interests. In essence, this means that the inherent normative objective of this study is improving board efficiency, in line with Malmi and Granlund (2009). Efficiency must not be confused with increasing shareholder value, as such an objective is diffuse, and does not separate means from the goals. By improving corporate governance, we can only increase the quality of governance process, so that it better reflects interests of various beneficiaries of corporate outcomes, on an accepted risk level and with an appropriate time horizon, whatever they may be.

## **4.2 Method**

Silverman (1993) defines methods as specific research techniques such as personal observation, textual analysis or statistical studies through regression analysis. The main research methods used in the second, third and fourth essay is standards multivariate regression analysis. An empirical database is collected, categorized and combined with existing outside data. After formulating relevant research questions and hypothesis, models for multi-nominal regression are built, and further analyzed by standard ordinary least square calculations. In addition to standard tests of model fit, descriptive statistics and correlation tables are presented and analyzed.

Choice and treatment of dependent and independent variables is a key method choice. The dependent variable in the second essay analyzing representation is an index of disclosure, which follows e.g. Gompers, Ishii and Metrick (2003) using indexes as a proxy of quality of corporate governance. In the third essay, which focuses on division of power between board and management, dependent variable is the decision limit as a proportion of market value of the company, reflecting the proportion of shareholder wealth boards are willing to delegate to management in investment decisions. The final essay investigates how decision control is impacted by financial distress, and what kind of impact it has on the division of power between board and management. Creditor interest is measured

through monetary decisions thresholds, better reflecting creditor perspectives in corporate risk taking. Independent variables used in empirical regression models can be divided into three main categories, variables related to ownership, variables related to board characteristics and variables related to firm characteristics. This division is typical in corporate governance studies, firm-related variables being used as control variables to increase the reliability of results. However, the first essay applies a different method. It is a conceptual and descriptive work where basic statistics and examples are used to illustrate how companies understand materiality in decision-making.

#### **4.3. Data**

The empirical material of this study is based on 600 largest European companies by market capitalization, and its most important variables are collected from board rules, matters that boards consider material enough to require their involvement. Already the Cadbury Report on Corporate Governance in UK and its proposed Code of Best Practice, published in 1992, required that

“1.4. The board should have a formal schedule of matters specifically reserved for it for decision to ensure that the direction and control of the company is firmly in its hands”

and further in its notes recommended that

“A schedule of matters specifically reserved for decision by the full board should be given to directors on appointment and should be kept up to date. The committee envisages that the schedule would at least include:

- (a) acquisition and disposal of assets of the company or its subsidiaries that are material to the company
- (b) Investments, capital projects, authority levels, treasury policies and risk management policies

This dissertation seems to be the first one systematically investigating matters reserved to board, which may be explained by its unique sample of companies. European material provides an advantage, as based on random checks, similar information does not seem to be commonly available for US

companies, and cross-country studies considering European Union as one single market for governance research are still few.

The research material is based on hand-picked data from 600 largest European companies by market capitalization, forming EuroSTOXX 600 index as of 25.8.2012. The companies in the sample are listed in 17 different countries belonging to European Economic Area and represent 19 different industries. Although a few exceptions exist, the legal domicile and location of listing are usually the same. This paper assumes *functional governance convergence* for companies in developed economies, in line with Hansmann and Kraakman (2001) and Hopt and Leyens (2004). Investors, boards and management are assumed to adapt their approach to decision management in ways to align their practices according to commonly accepted principles of corporate governance, despite lack of uniform legal environment. Such practices include clear separation of roles of owners, board and management, transparent corporate governance, commonly accepted international reporting practices and oversight by competent authorities. Shleifer and Vishny (1997) and Hansmann and Kraakman (2001) have argued that the integration of global financial markets is driving the integration of governance practices, and national legal environments follow only with a lag. Shareholder as the primary beneficiary of governance forms the philosophical basis of the functional convergence.

The material on companies has been collected from their websites, and includes also annual reports, articles of association, corporate governance reports or statements and most importantly, rules of the board<sup>10</sup>. This material on board rules and decision limits is not available on any databases, and its collection and coding is not only laborious but requires in-depth analysis of what the boards have actually meant. The key data consists of thresholds of decision control, monetary or other numeric values that determine when management is obliged to submit a decision for board approval. The numeric limits cover four major areas, investments, financial transactions, commercial agreements and technical matters like litigation or tax settlements. Each company may have more than one decision limit

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<sup>10</sup> Rules of the board can have various names, matters reserved to the board, board charter, board by-laws etc. Sometimes board rules are included in other documents, like document de reference in France or regulatory corporate governance reports in Italy or Spain

related to each area, and the limit may be expressed either as an absolute value, as a relationship to another financial indicator like sales or equity or in commercial agreements even as megawatts.

More than half of the 600 companies in the sample disclose their board rules or essential parts thereof, and 297 disclose at least one numeric limit of decision control, showing that boards commonly consider what defines materiality in decision-making. The total number of identified numeric limits in the sample companies was 1120, which means that companies disclosing their board rules define on average for four separately identified decisions thresholds subject to board authorization.

Focusing on monetary limits omits certain other matters boards consider important like strategy, CEO choice and regulatory oversight (Adams, Hermalin, Weisbach 2010). However, as all of these belong to the agenda of practically every single board, there is no variation so their impact is difficult to study. Boards can also make decisions that may be of symbolic value like political donations or charity, which do not have direct impact on company performance. Such decisions have been omitted from this study even if boards had disclosed limits for them.

The annual reports were used as the source of information for classification of ownership and board structures. The reports were analyzed for the financial year that ended between 31.12.2011 and 30.12.2012 as quite a number of companies close their financial year in the middle of the year. Boards were categorized for their independence, CEO role in the board, management representation, employee representation, internationalization of the board and gender split. Most of the companies disclose such information, but in cases where it was not explicitly provided, the personal biographies of board members were used<sup>11</sup>. In cases where independence was separately disclosed for independence related to the main shareholders or independence of the company, classification required a fulfillment of both criteria. Besides the composition of the board, data on number of board

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<sup>11</sup> This relates mainly to companies based in Germany and Switzerland, which do not require the disclosure of board independence by person. In case nationality of board members has not been disclosed, biographic information like name, past work experience and education has been used. In case where members are from culturally similar neighboring countries like Germany/Austria, categorization may not be exact, but the difference is considered irrelevant

members and frequency of meetings was also collected. The company websites were analyzed for any other additional information.

The largest owners were categorized into 11 main categories, but for the analysis these were further simplified into four, firms that have Family or State or Other clearly identifiable single owner as the dominant shareholder or companies that are Widely held<sup>12</sup> (Table 1). It can be questioned if this kind of categorization is internally consistent, if such groups are homogenous enough to behave in a similar manner. Anyhow, for the purposes of this study, the aforementioned classification is adopted, as it is widely used in corporate governance literature and thus the results are comparable with past research.

The financial data is derived from Orbis databases, using annual information for the accounting year that ended between 31.12.2011 and 30.12.2012. When needed, the data has been converted into euros with the FX rates in force at the moment of closing, considering the different closing months of the companies. When pieces of information have been missing from Orbis, annual reports have been used. The accuracy of Orbis data has been controlled through random checks. The data collection process has included two research assistants, and more than 10 % of the data has been checked by two persons for potential errors in classification. Furthermore, all data has been reviewed at least twice in order to ensure the quality of data collection and consistency of coding.

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<sup>12</sup> There are 73 cases where agent owners (institutional investors) hold in excess of 10 % but below 20 % of the votes. These are anyhow categorized as widely held



TABLE 1 Ownership voting share

This table reports summary statistics for ownership statistics for the 600 largest publicly listed companies in Europe by market capitalization. The firms are classified by their largest owner (share of votes), as disclosed in the annual report for the financial year ending between 31.12.2011 and 30.12.2012. Category "Family" consists of firms where the largest shareholder is either a single person or a family-controlled entity, "State" firms where state is either directly or indirectly the largest shareholders, "Other" is a category consisting of various types of dominant shareholders, such as "Investment companies" such as Industrivärden in Sweden, "Companies" denoting other firms as dominant shareholders, such as Porsche controlling the majority of Volkswagen stock. All abovementioned categories include only firms where such an owner controls more than 10 % of the voting share, all other companies are classified as widely held, even if the largest shareholder with less than 10 % share would otherwise belong to these categories. The remaining companies are classified as "Widely held".

	N	Mean	Std. Dev.	Min	Max	Med
Family	130	43%	19%	12%	90%	49%
State	46	36%	16%	11%	85%	32%
Other	145	37%	21%	11%	99%	29%
- Association	1	22%	...	...	...	...
- Bank	8	36%	22%	13%	27%	82%
- Company	56	38%	34%	15%	34%	92%
- Co-operative	3	31%	...	17%	52%	23%
- Employees	2	13%	...	12%	14%	14%
- Foundation	19	52%	23%	20%	99%	54%
- Investment company	44	29%	30%	11%	70%	35%
- Private Equity	7	43%	30%	11%	70%	35%
Widely held	284	8%	3 %	2%	20%	7%
Total	600	24%	15%	2%	99%	15%

Table 2 presents the breakdown of the full sample by country and industry. All of these companies publish their regulatory information on their website, and the overwhelming majority of material is available also in English. There are some minor exceptions where parts of the material (board rules, articles of association or corporate governance statements) are only available in the native language, French, Spanish, Italian, Dutch or German, and in such cases original language versions were used.

Table 2

Eurostox 600 companies as of 25.8.2012 by industry and by country of listing

EuroSTOXX 600 stock index divides companies into 19 different industries. All of the companies are listed in countries either belonging to or associated with European Union, although a few have their headquarters in other countries. Countries are AT = Austria, BE = Belgium, CH = Switzerland, DE = Germany, DK = Denmark, ES = Spain, FI = Finland, FR = France, GB = Great Britain, GR = Greece, IE = Ireland, IT = Italy, LU = Luxembourg, NL = Netherlands, NO = Norway, PT = Portugal, SE = Sweden

Industry	Country																		TOT
	AT	BE	CH	DE	DK	ES	FI	FR	GB	GR	IE	IT	LU	NL	NO	PT	SE		
Automobiles & parts				6			1	4	1			2						14	
Banks	2	1	5	2	3	6	1	4	5	1	1	9			1	1	4	46	
Basic resources	1			2			1	2	1	15				1	1		3	28	
Chemicals		2	4	9				1	2	4				2	1			25	
Construction & materials			3	2	1	3	1	5	1			1		1			3	21	
Financial services		3	3	1				2	14			1					5	30	
Food & beverages		1	4	1	1	2		3	6	1	2	1		5	1			28	
Healthcare		1	7	6	6	1	1	3	6		1			1			3	36	
Industrial goods and services	1		9	11	2	3	5	14	36		1	4		8	1		9	104	
Insurance	1	1	5	3	2	1	1	3	10			1		3	2			33	
Media			1		3			7	10			1	1	2	1		1	27	
Oil & gas	1					2	1	5	12			2		2	6	1	1	33	
Personal & household goods			2	5			1	6	10			2					5	31	
Real estate	1	1	4	3				5	9					3			3	29	
Retail		2	2	2		2	1	3	9					1		1	1	24	
Technology			1	6			1	7	7			1		2			1	26	
Telecommunications	1	1	1	2	1	1	1	1	4			1		1	1	1	2	19	
Travel and leisure				1				3	14	1	2							21	
Utilities	1			2		5	1	4	7			4				1		25	
Total	9	14	50	67	16	28	19	82	180	3	8	30	1	32	15	5	41	600	

#### 4.4. Reliability and validity

*Reliability* concerns the consistency of research setting, if we can repeat the same results in similar circumstances, while *validity* measures if our research achieves what it is attempting to do (Smith 2003). The first test of reliability relates to the quality of data-gathering process and the internal consistency of categorization. Considering that a vast majority of data in this research is based on audited information, the reliability of source data has been externally verified.

Reliability of data gathering can also be increased by comparing its descriptive statistics to an external source. Corporate governance is a subject for extensive consultant and industry association surveys (see e.g. Conference Board 2011, Korn and Ferry 2012). A survey most closely resembling the sampling of this study is Hay Group's regular study on corporate governance in Europe. The latest release (Hay 2014) is based on a sample of 374 large listed companies in 12 European countries and its data

is collected from annual reports by consultants in each one of the countries. There are also some significant differences, though, as the study focuses only on non-executive directors, its country basis is more limited and the minimum size of companies included in the list differs by country. However, most of the companies included in Hay survey are included in EuroSTOXX 600, so the sampling has a high level of overlap. A comparison on the available common descriptive statistics shows that data collection processes have led to similar results, supporting the validity of collection and classification of raw data in this study.

Table 3 Comparison of descriptive statistics to Hay Group Study (Hay 2014)

Hay Group regularly studies corporate governance in Europe. Although their sampling is somewhat different, they publish certain descriptive statistics that are comparable to this dissertation. The main differences in sampling arise from weighting by country – Consultants from Hay Group include companies from 12 different countries while this study includes 17. The selection of companies is based on national stock indexes, which leads to major differences in country weighting. Largest negative deviations (between 3% and 5 %) in Hay sample arise from Spain, Germany and France while largest positive deviations arise from Italy, Norway and Austria. In addition, Hay considers only directors that are not employed by the company, which materially increases the proportion of independent directors, reduces the number of directors with the same nationality as the company and reduces the proportion of female directors.

	Hay Group	This Study
Year	2014	2012
Companies	372	600
Countries	12	17
Average number of board members	10	11
Average number of board meetings	8	9
% independent directors	78 %	59%
Same nationality as company	64%	78%
Female	23%	16%

The remaining differences can be explained by differences in sampling. Hay group study is based companies that form a major equity index in each country, leading to major underrepresentation of German and French companies and overrepresentation of companies from all smaller countries. Hay study is based on non-executive directors, while this dissertation includes all board members in its database. Hay excludes information which is not readily available, like independence of directors in Germany, which this study assessed through analysis of individual directors' backgrounds.

A second challenge to reliability concerns the internal consistency of categorization of data. This work follows past practice of classification schemes commonly used in corporate governance research. However, these classifications are not without problems. Groups of actors may have internal differences so large that seeing them as one consistent variable may not

make sense. This problem is common in all social sciences, where actors are grouped based on some common traits. As an example, ownership structure can be analyzed from a clearly defined perspective of percentage of voting or dividend rights. However, governance studies, including this one, assume that types of owners as a category is also relevant. Two examples of such categorization are family owners or institutional investors. It can be argued that using families as an independent variable is gross simplification and may distort reality as there is no guarantee that families form a consistent category. The same applies to institutional investors, some being funds with specific goals or investment strategies, others being semi-public institutions tightly controlled by regulators, such as pension insurance companies or social security funds. Similarly, independence of directors is a concept widely used and information on independence can be found in annual reports or separate governance disclosures. In extant board research, independence is by far most common variable in empirical studies, and the determinant receiving extensive support as being connected to various acts of governance. However, there is no guarantee that independent directors would act consistently with each other, but even acknowledging the behavioral weaknesses of the categorization variables used, they are strongly supported by extant research, and lacking access to suitable alternatives, the reliability of such variables is as good as possible.

A third challenge related to reliability arises from if and how national corporate governance frameworks influence the results of the study. However, there are strong arguments to support the assumption that the sample forms a coherent whole. The empirical material of this study is primarily collected from board rules, which as such are not subject to national regulations. The companies in the sample are very large, consisting of 600 largest publicly listed companies in Europe, and their character is very international. Even though information for non-nationals share of shareholding is not available, for example, 76 companies had the largest global investment manager, US based BlackRock Inc as their largest shareholder. Boards are also international, on average companies had 2.3 foreign board members, more than two thirds of companies having at least one board member of different nationality from the company.

In order to further assess the potential country impact to the relevance of results, Table 4 presents certain key variables by country or country groups.

The counties are assessed as follows: Two largest (France and Great Britain) separately, two similar Germanic countries (Germany and Netherlands) grouped together and all other smaller countries combined.

Table 4 Averages for key variables by country (N=242)

This table presents the key variables by country, grouping countries as follows: FR = France, GB = Great Britain, DE+ NL = German and Netherlands and Other = all other countries. In order to make the statistics as relevant as possible for the dissertation, only companies that have disclosed an investment limit (N=242) are included.

Country	FR	GB	DE+NL	OTHER	Tot
N	65	54	44	79	242
Sales, billions of EUR	21.1	9.4	18.6	14.6	18
Median Investment limit as of MVE	1.7%	0.4%	0.6%	0.4%	0.6%
<u>Board characteristics</u>					
No. of members	13.4	10.4	10.9	11.6	11.7
No. of meetings	8.6	9.0	7.1	10.3	9.0
PCT Independent	52%	60%	66%	63%	60%
PCT Foreign	21%	19%	25%	22%	22%
PCT Female	19%	15%	16%	15%	16%
<u>Largest shareholder</u>					
Family	26%	11%	11%	29%	21%
State	22%	2%	7%	15%	12%
Other dominant	29%	13%	27%	22%	23%
Widely held	23%	74%	55%	34%	44%
<u>Ownership share of largest shareholder</u>	30%	18%	21%	28%	25%

The analysis of descriptive statistics by country provides a mixed picture. The median value of “Investment limit as of market value of equity”, which is used as the dependent variable in the third essay, is highest for the French companies, all other country groups being generally on the similar levels. However, considering that the core focus of this dissertation are the boards, board statistics are strikingly similar, providing support to the relevance of the results based on Europe-wide sample of boards. Ownership statistics show a well-known difference between UK and continental European companies – a high proportion of large companies have a clearly identifiable dominant owner in all other countries except in UK. However, in the empirical analysis the challenge provided by nationality is considered through using a Hofstede cultural indicator as a control variable, which proves to be significant in all regression models.

Another challenge on reliability of results can arise from language issues, as the empirical material is collected from 15 different European countries and some of it was available only in companies’ home country native language, although the vast majority is in English. However, the terminology is very similar in most Latin languages, and with good understanding of several key European languages, the translation of terms was not seen as a material issue

We can also question if the nature of boards impacts the reliability of the results. As argued earlier, a board is defined to be an elected body that represents shareholder interests and which exerts decision control over management. Such a body is normally called board of directors, although in Germany, supervisory board has a very similar role and is considered “a board” in this study. Other entities having a position between shareholders and boards, based on the analysis of the data, have practically no decision rights besides potentially having the right to nominate board members on behalf of the shareholders. This dual structure of nomination may impact the accountability of directors, but as such cases are very few, they have not been excluded from the analysis. Similarly, shareholder nominating boards are starting to become increasingly common, especially in Nordic countries, and they carry real power in board nominations, even if formal power remains in the hands of the shareholders. However, this structure can be seen rather as strengthening the accountability of board members towards shareholders, as it creates a clear structure how to find candidates and assess board performance on behalf of actual shareholders.

Finally, it can be questioned if the legal role of top management differs country by country, especially in bodies called executive boards that exist in Germany. Although such a structure may highlight the legal liability of top management, it does not change the basic responsibility of directors in boards determining management decision rights.

*Validity* measures if our research setting does what it is supposed to do. Validity can further be divided into internal, external and construct validity (Smith 2003). Internal validity questions the causality of relationships of variables. Board studies are hampered by the question of endogeneity (Adams, Hermalin and Weisbach 2010), understood as a loop of causality between independent and dependent variable. This dissertation does not make any claims of causality, and considering the cross-sectional data used, it would even be virtually impossible, as causality requires a sequence in time. Thus the internal validity is impossible to assess.

External validity asks if the results are applicable to other research settings. The empirical material of this research is based on 600 largest publicly listed European companies by market capitalization. Although data represents well the corporate sector and ownership structure of European companies,

there is no guarantee that similar results could be reached for smaller companies or companies managed from locations outside European Union. Aguilera et al. (2008) argue that governance solutions are contingent to their institutional setting and environmental factors, and although global regulatory environment has tended to converge (Hansmann and Kraakman 2004), differences may still be large enough to make international comparisons incomplete. The most significant challenge concerns US markets, especially as a majority of research in accounting, finance and corporate governance is US-based. As discussed earlier, the institutional setting of board selection has major differences across the Atlantic, so results may have limited external validity for US companies.

Construct validity questions if the research is really measuring what it is intended to measure, or if the phenomena could be explained by factors external to the model. A constant issue with interpretation of statistical results in social science research are the low levels of phenomena being explained by models, expressed as adjusted R squared (Gill 2015), and a question arises if this refutes the construct validity of results. However, considering the complexity of phenomena and unavoidable lack of precision in proxies used, this is not surprising. Receiving statistically significant results from “noisy” material can actually be considered positive for the reliability, as “noisiness” increases random variance and thus tends to reduce the strength of relationship between observed variables. In addition, it can be argued that in the case adjusted R squared results were very strong, most likely the phenomenon and relationship would be self-evident, and the same conclusions could probably have been reached without scientific study.

A second challenge to construct validity arises from definition of proxies. As research questions cannot be directly analyzed through available data, in line with extant research, this research uses proxies to measure its research objects. In the second essay, an index of disclosure is used as a proxy of board accountability, and calculated based on number of disclosed numerical limits of decision thresholds. Similar proxies are commonly used in governance and disclosure research (e.g. Gompers, Ishii and Metrick 2003, Bebchuck, Cohen and Ferrell 2009), so the treatment is consistent with past practice. An unavoidable problem with proxies based on frequency is that different indicators receive equal weighting disregarding their importance. In the second essay this problem is less material than in

comparative research. Assuming that boards define materiality in internally consistent way, there should be less variation to criteria used across definitions of materiality.

The variables used in the third and fourth essay are based on financial information, so they are not subject to the same classification problem, although it can be questioned how boards have arrived in their specific limits, if they are a result of a deliberate process, follow thy neighbor process or a pure administrative exercise. Considering the major variance in both in the scope of matters as well as thresholds of control, it is difficult to arrive in any other conclusion that such limits are based on an intentional process, and thus generally reflect the best understanding of boards of directors what is material enough to require their involvement for the company they serve and the business in which the company competes.

This dissertation does not specifically investigate how board rules are created. In principle, such rules could be approved in shareholder meetings, however, this does not seem to be the case. Already the pivotal Cadbury commission report (Cadbury 1992) required that “The board should have a formal schedule of matters specifically reserved to it for decision to ensure that the direction and control of the company is firmly in its hands”. Although the report does not explicitly determine how such schedule should be approved, boards seem to be self-sufficient in setting their own rules<sup>13</sup>. Throughout the data collection process, not a single observation was made of any shareholder involvement in setting board rules.

An additional remark on validity needs to be made on what Silverman (1993) calls historical, political and contextual sensitivities. By historical sensitivity she means the time-bound nature of results, as phenomena are not separate from the historical setting in which they exist<sup>14</sup>, and as social science

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<sup>13</sup> For example, BHP Billiton states in its “Board governance document” dated 10 May 2012 that “In appointing the Board, shareholders vest the management and control of the business and affairs of the Group in the Board. The Board has reserved some matters to itself for decision and, save for those matters, has delegated authority for all other matters to the CEO”

<sup>14</sup> In order to solve this problem of alternative realities, we need to make choices. It may be useful to be aware of the personal background of the person(s) providing the research. As commented above, in order to understand the horizontal agency problem as described by Shleifer and Vishny (1997), it is relevant to know their background in privatizing state-owned assets in post-soviet Russia, and the problems they encountered establishing what developed markets consider as proper arrangements of ownership and governance. Although the ideas of Shleifer and Vishny have evolved to become concepts of their own, the selfish world-view of raw capitalism hides behind their analysis, which may not be applicable to other social



research has endogenous tendencies – research may impact the way people act in the future. Governance is an evolving process, and there is no guarantee that the empirical results of this study would remain stable over time. Political sensitivities refer to choice of subjects, being impacted by the attention given to problem in hand in societal discourse. All researchers in corporate government have encountered numerous articles motivated by a few highly published corporate scandals, or compensation studies motivated by excesses of executive pay.

The motivation for this study arises from practical experiences of board work, and the related interest to understand what is the role of the board, how it arrives in its decisions and if it has real impact on outcomes. Thus internal validity of this study may be hampered by pre-assumptions researcher has made on reality based on his own experiences. Contextual sensitivity is a concept closely related to contextual validity, discussed above. It questions if the concepts used are actually optimal for the defined research questions. In the second and third essay, concepts from extant corporate governance research are considered insufficient to analyze the representative role of boards, and thus well-established concepts from a related field, political science, are introduced into literature. It may limit the contextual sensitivity of this study, as extant governance researchers are unfamiliar with such concepts and may struggle to apply them to their own research.

## **5. Summary of the essays**

### **5.1. First essay, “Materiality in Corporate Governance”**

The first essay investigates materiality from ex ante decision-making perspective, instead of widely researched ex post view of audit and legal

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contingencies. Russia in 1990's was in transition from central planning to market economy, and rule of law, transparency of information and proper regulation found in developed markets were still lacking.

studies. The concept of materiality is not well defined in accounting or legal literature. Consequently, regulators and courts leave the judgment to individual auditors and judges, based on how “a reasonable investor” would act if misstatements or failures of disclosure were not observed and corrected. However, boards of directors need to take a stand on materiality with uncertainty of outcomes, and decision thresholds determined by boards thus provide unique information how directors understand materiality.

Definitions of materiality have two axis, depth and width, depth designing the level of decision control, providing measurable values when a decision is material and when not. On the other hand, width of materiality is much more complex, as it requires boards to define which issues have material significance to companies and thus need to be brought under board control. The most common definitions concern investment decisions, reflecting the traditional approach of boards of directors, seeing long term commitments of funds on physical assets as most important decisions companies can make. However, in several industries investments in fixed assets cannot be considered as most material decisions, and thus commercial, financial or technical decisions, are assessed in this essay comparing them to investment limits as a benchmark.

The essay being a descriptive and conceptual study, its benchmarks can be seen as its main outcomes. The average investment limit for the 242 companies providing such a limit<sup>15</sup> was 0.68 % of market value of equity, which, when compared to benchmarks set by auditing firms seems quite low. There is a huge variation in the magnitude of decision limits, clearly indicating that some boards act as managements, subjecting minor decisions to their decision control, while other boards take only a supervisory role by delegating most of their powers to day-to-day management.

The differences in width of limits reflect the behavioral characteristics of directors. Although boards commonly define different monetary limits for different types of decisions, a phenomena of “magic numbers” is also present, boards setting single thresholds of materiality disregarding the

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<sup>15</sup> Essay 2 presents a median limit of 0.6 %, the difference being explained by the exclusion on financial sector from its sample of 202 companies

nature of decision. In addition, showing the human nature of directors as decision-makers, limits related to direct losses were found to be generally lower than other decision limits, indicating presence of loss avoidance.

The objective of Essay 1 was to advance our understanding on the concept of materiality, specifically through investigation of what constitutes a material decision in corporate governance. The novel approach was to study materiality from ex ante perspective, differentiating it from ex post analysis of material misstatements or omissions of material facts, which are the focus of audit and legal research on materiality. The essay provides new knowledge on issues boards consider material enough to require their involvement in decision-making. In addition, the essay develops our conceptual understanding of materiality, which is one of the core concepts in accounting literature, by establishing the two axis of materiality in decision-making, width, describing the variety of issues boards consider material and depth, analyzing the numeric thresholds board set as limits for decisions requiring their approval.

## **5.2. Second essay, “Representation, Accountability and Disclosure - A Principal-Representative-Delegate Model of Corporate Governance”**

The second essay introduces representation theory into corporate governance. It starts by arguing that the distinct role of board of directors does not well correspond to standard postulates of agency theory, incentives and control, introducing a more refined principal- representative-delegate model of governance. In order to better understand the intermediary role of the board, the relationship between shareholders and directors is seen through representation, where accountability and disclosure form the necessary tools for shareholder assessment. In addition to governance literature, this essay contributes also to disclosure literature by introducing and analyzing the concept of board disclosure as a separate phenomenon from general corporate disclosure.

Representation theory sees trustee and delegate as the two basic forms of representation. In the first, representatives (board of directors) act on their

own judgment as trustees, distancing themselves from shareholders after they have been elected, while in the second, boards more truly attempt to reflect the opinions of their electors, acting as delegates. In order to analyze the nature of representation, it is concluded that representation requires accountability, and a proxy of accountability is created from disclosure of matters under board decision control. In the empirical results both characteristics of representation were present, role of trustee being connected with companies with diversified shareholding or agent owners as dominant shareholders, while in companies with clearly identifiable dominant shareholders boards rather act as delegates, providing less information to all shareholders, essentially having face-to-face accountability towards largest shareholders. In addition, empirical analysis shows the endogenous role of directors, board disclosure representing directors' self-interest in promoting their skills to society at large as proficient decision experts.

The practical relevance of this paper arises from accountability of directors. It highlights the need for a closer link between directors and shareholders based on accountability. Moreover, principal-representative-delegate model has implications to director election processes and management incentives. It challenges current ways of electing corporate representatives; back-room negotiations leading to proposal of candidates is opaque, and does not guarantee a true representation of preferences of whole shareholder base. Increased transparency of the election process could improve the quality of representation by making directors more accountable. Principal-representative-delegate model could also have consequences to incentive systems. If we see top management as delegates of shareholders' representatives, carrot and stick of incentives and control as sole basis of motivation can be criticized. Delegates act on limited authority, and the behavioral assumptions of motivation of a delegate are different from the self-interested agent as they have limited tools to maximize their personal utility, their powers being explicitly restricted by the board.

The objective of essay 2 was to provide new insights to the relationship between shareholders and board, seeing boards as intermediate actors with a distinct role in governance, with a role that classical agency theory fails to consider adequately. This goal was reached by introducing the theory of representation

into corporate governance, arguing that the role of board can better be understood by applying concepts of representation and accountability. In addition, the theory of representation was successfully applied in the empirical analysis, demonstrating that boards tend to act as trustees in situations when owners are diverse and as delegates when company has a clearly identifiable single dominant owners. This essay opens several fruitful avenues for future studies on the relationship between boards and shareholders.

### **5.3. Third essay, “Power and Decision Control”**

The third essay investigates the limits of decision-making power as determined by boards of directors. It starts with the traditional split of governance roles, risk-bearing by the shareholders, decision control by the board and decision management by the CEO and top management team. Even though shareholders may have formal power, in reality most of decision rights are delegated to their elected representatives, board of directors. Boards have an interesting self-regulating role, as they independently determine which decision rights to retain, and which rights to further allocate to the management.

In order to analyze the division of decision rights, the essay discusses concepts of power, separating process power, i.e. ability to influence decisions, from power to influence actual outcomes. It is evident that boards have process power, but extant research has struggled to establish if it also leads to intended outcomes. Outcome power is also discussed by Aghion and Tirole, (1997) who argue that formal power does not necessarily entail real power. However, this essay focuses only on process power, arguing that a properly designed decision structure enables a more efficient process of decision-making, enabling boards to concentrate on issues material to shareholders and simultaneously allowing management focus on preparation of such issues, leading to better quality decisions.

Limits of board powers are investigated through a model, where monetary values of decision limits are explained by ownership, board, management and corporate characteristics. First a power function of a firm is built, where

combined powers of board and management are considered as constant in the short run, the split between the two determined by thresholds of power set by the board. The empirical analysis supports the idea of board functioning as a distinct and independent body, as no influence from shareholder structure or ownership concentration was found in the ways boards determine decision rights, indicating that current governance arrangements in Europe are a satisfactory solution for horizontal agency problems. On the other hand, symptoms of vertical agency problem seem to exist in boards with a dual CEO/Chairman structure, such boards delegating more of their decision rights to management than in other companies. Otherwise empirical analysis indicate that independent directors may suffer from information gap being more inclined to delegate powers to the management, while active boards keep tighter reins on power than directors that meet less frequently.

The objective of essay 3 was to contribute to the literature on corporate governance by investigating the relationship between board and management through concepts of power, decision control and delegation. This goal was reached by defining a model on how power is divided between various actors in corporations, and then analyzing the division of power between board and management in depth through the empirical material. It was demonstrated that boards are effective means of mitigating horizontal agency problems, although traces of vertical problem were found still to exist.

#### **5.4. Fourth essay, “Corporate Governance in Financial Distress – Reflection on the Third Agency Problem”**

Creditors have no formal role in corporate governance, but they have major influence in situations of distress. Distress is an abnormal situation where creditor governance replaces standard shareholder-centered governance and where classical agency relationships between shareholders, board and management no longer hold. Creditor governance is a means of solving conflict of interest between holders of debt and holders of equity. This is what governance theory understands as the third agency problem.

The final essay focuses on what happens to governance in the gray area when distress is evident but formal power still remains in the hands of corporate bodies. The relationship between a company and creditors is governed by contract, and as contracts include assumptions of firm ability to repay the debts in the future, they are bound to be incomplete and need to include a mechanism to resolve unexpected outcomes. This is called incomplete contracting theory, and its most apparent practical application is financial covenants restricting companies' freedom of action under situations of distress.

The essay develops further a model of creditor governance presented by Nini, Sufi and Smith (2012), arguing that there are five different stages of creditor influence on firms. First, in the state of normalcy, creditor influence is hard to observe as the company is healthy and able to fulfill all its contractual commitments. A second stage arises when a prospect of breakage of financial covenants arises, already impacting corporate decisions. The actual breakage with a major shift in decision rights is the next stage, followed by restructuring and in the end, bankruptcy, each stage having its distinct governance characteristics

The empirical part of the study focuses on how the role of the board changes from representatives of shareholders to representatives of creditors in situations of distress. This phenomena is demonstrated through a humped structure of decision rights, companies approaching distress allocating more decision rights to management, until a critical level is reached, where directors radically limit such rights in order to protect creditors, and at the same time their own reputation. Through decision control, directors protect creditors from potential moral hazard of shareholders in situations where their share of enterprise value is very small, and they have a non-symmetrical incentive to increase risk as gains will be theirs but losses belong to creditors.

The objective of the final fourth essay was to contribute to literature on the third agency problem, the one between the company and its creditors, integrating concepts from financial contracting theories into corporate governance, specifically in situations of distress. The essay provided new conceptual analysis on how boards mitigate the potential moral hazard of shareholders and management, which is one of the key issues in incomplete contracting theory

and which was shown to be the conceptual basis of covenants. The empirical analysis provided support to key assumptions, and although evidence was limited, it demonstrated the changing role of directors from representatives of shareholders to representatives of creditors in situations of financial distress. Thus the objective of the fourth essay was achieved.

## **6. Contributions and Implications for Practice**

### **6.1 Introduction**

This dissertation is based on a refined agency model of corporate governance. Instead of seeing governance as bipolar arrangement between owners and management, this work treats the governance as a triangle, where shareholder interests are conveyed into acts of management through their representatives, the board, and which thus consists of separate but interlinked relationships board has towards shareholders and management. The fundamental prism through which this triangular model is analyzed is allocation of decision rights, being a proxy of how boards understand their role as representatives of shareholder interests. In order to understand decision rights, this work also builds on the concept of materiality, defining the limits of power and through their disclosure in board rules, provides evidence to shareholders of the accountability of their elected representatives.

The dissertation contributes both to theory of corporate governance, and more specifically, theory on boards, as well as provides new insights useful for the practitioners. The triangular model of governance extends the classical agency theory by providing a more refined understanding of the dynamics of corporate governance, treating separately the two main relationships of delegation of decision-making power, the first between shareholders and boards and the second between boards and managements. It shows that the traditional postulates of incentives and control are not



sufficient to understand board's role in corporate governance, and argues that theories of representation and accountability are more suitable for understanding this relationship. This work approaches the relationship between board and management from the perspective of power and delegation of decision rights, and its contribution to theory is to see management rather as delegates of directors than agents of shareholders.

Although the aim of this dissertation is not to argue that agency theory is irrelevant, it raises serious concerns if the omnipotent agency approach is sufficient in understanding governance, at least in large publicly listed companies. It can be argued that corporate governance is only a subset of a larger governance problem, how the interests of a large number of beneficiaries are transferred into action through a representative body, as the beneficiaries are too many to participate effectively and directly in decision-making, and thus a representative body with wide delegated powers becomes necessary to control the actual organization managing the decisions. Thus the proposed principal-representative-delegate model can be seen as a more general model of corporate governance than the traditional dualistic principal-agent model, and it may open up new avenues in understanding the roles, responsibilities and behavior of various actors. Even though empirical analysis included in this dissertation is generally supportive to the principal-representative-delegate model of governance, further theory development as well as empirical testing is certainly needed before it can become more mainstream.

There are several important contributions to practice. First, by developing the concept of ex ante materiality, boards should better be able to create rules that improve their efficiency by enabling them to use the limited time and resources on issues that are most material for the shareholders. Secondly, this dissertation helps boards better understand to whom they are accountable and how they can improve this accountability through disclosure. Thirdly, delegation of decision rights being the responsibility of boards, a better understanding of determinants thereof assists boards in monitoring managements and again, assists boards in decision control, providing better understanding of when boards can add value and when not. Finally, the fourth practical contribution arises from a better understanding of boards' relationship towards creditors, and the ill-understood change in

board role from representatives of shareholders to representatives of creditors in situations of financial distress.

Next, I turn to a more detailed discussion of the contributions

## **6.2 Conclusions and contributions**

Dualistic shareholder-manager model of governance provides a simplistic model of governance, which can be further developed by shifting the perspective to a triangular model considering shareholders, boards and managements as separate actors, each with a distinct role. Triangular view sees governance consisting of two independent but closely related relationships, the relationship between shareholders and board of directors, based on representation and accountability, and the relationship between directors and management, based on delegation and control. Additionally, the relationship between management and shareholders forms the third leg of this triangle, primarily consisting of economic outcomes of acts of management. This approach acknowledges diversity of shareholder risk preferences and time horizons, and governance is seen as a mechanism of translating these multiple preferences into an organized structure that is capable of action.

Board of directors is the apex of corporate decision-making (Fama and Jensen 1983), although the extent of its powers and influence on corporate outcomes is weakly understood. Shareholders delegate the vast majority of their powers to directors, due to economies of decision-making, as it would be impractical for them to participate in complex decision requiring extensive knowledge of day-to-day business issues, besides decisions fundamental to shareholder rights. On the other hand, board is a self-sufficient entity in corporate governance, independently determining its limits of powers, which matters it considers material enough to require its involvement and which can be delegated to operative management.

The main argument in this dissertation is that boards need to be considered as a distinct actor in corporate governance, having an independent role with extensive powers, being able to influence not only management decisions

but also how shareholder preferences are translated into a unitary decision-making structure. The detailed contributions analyze how this intermediary role manifests itself in board's relationship with shareholders, managers and creditors.

The first contribution arises from defining how boards understand materiality in decision-making. Materiality as a concept is not clearly defined in accounting (Edgley 2014), and extant literature mainly considers the problems of auditors, how to determine thresholds for ex post assessment of misstatements in financial reports. Neither audit nor legal literature considers the ex ante problem of defining materiality in decision-making, which anyhow is the basis of any hierarchical structure of control. The empirical results of the first essay provide novel factual information on materiality, providing benchmarks both for practitioners as well as regulators and standard-setters. Two concepts of materiality, depth and width are introduced, depth describing the limits of power on specific issues, while width defines the scope of matters boards consider material enough to require their involvement.

Each of the three remaining essays introduces a novel conceptual or theoretical lens to governance research. The second essay introduces a framework of analysis and concepts from general theory of representation to corporate governance research, investigating the relationship between shareholders and board. A principal-representative-delegate model of governance is presented, defining directors as representatives of shareholders and management as delegate or agent of the board. Another contribution relates to understanding how decision power is divided within a company. It is based on collection and analysis of previously neglected information on governance, matters reserved to the board as disclosed to shareholders. In the third essay, the power function of a company is defined to consist of powers held by shareholders, combined powers of board and management, powers of outside parties and unknown actors. The results demonstrate that traditional horizontal agency problem between dominant and minority shareholders are absent in the way boards execute decision control. However, duality of leadership in combined CEO / Chairman of the board role reduces board powers in relation to management, indicating continued vertical agency problems in such structures.

The final contribution of this dissertation focuses on the agency problem between the company and its creditors. Using conceptual framework from theory of incomplete contracts, it suggests that in situations of distress, the role of the board changes from representatives of shareholders to representatives of creditors, curbing moral hazard when the majority of residual financial risk transfers from shareholders to creditors. A conceptual model evolving from Nini, Smith and Sufi (2012) is built, showing the risk profile of a company as a function of relative split of enterprise value between shareholders and creditors. This essay also contributes to covenant literature in finance, modeling the role of financial covenants as a crossing point of risk level and risk split.

### **6.3. Contribution related to agency theory**

This dissertation started by arguing that principal-representative-delegate approach is a complement but not a replacement of agency theory. In this triangular model, governance still is a method for conveying shareholder interests into acts of management, and shareholders can be seen as principals and management as agents, although the term delegate can be used interchangeably with the term agent. However, this relationship is indirect, as board, acting as representative of shareholders, has wide delegated powers and an independent and intermediate role in the representing shareholder interests.

The contribution to agency theory emerges from the realization that governance consists of two separate but related relationships, the one between shareholders and directors, based on representation and arising from election, and the other between board and management, based on delegation and originating from contract. In contrast, standard governance theory sees only one relationship, between shareholders and management, and instead of representation and delegation, this contract leads to agency. Essentially, the central actor in what is called principal-representative-delegate model of governance is the board, which has an independent but intermediate role, influencing how shareholder interests are conveyed into acts of management. Representation and delegation can be seen as methods of managing both vertical and horizontal agency problems between shareholders and management and between large and small shareholders and thus being linked to classical agency theory.

Similarly, as discussed in the fourth essay, representation is a useful concept also in understanding how to solve the third agency problem, between the company and its creditors, if and how directors evolve from representatives of shareholders to representatives of creditors.

A theoretical implication of this work is to argue that corporate governance is only a subset of a larger societal issue of representation. Representation problem arises when a large number of interested parties arrange their decision-making in order for the interests of final beneficiaries being properly represented in actual decisions. Besides political or other societal organizations, this problem is increasingly relevant also for corporations, as the ownership of large publicly listed companies is dispersed, and through agent owners such as pension funds, other institutional investors or the state, practically everybody becomes an interested party in how corporates are being governed. Thus theory of representation may provide a framework for analyzing governance in large public companies, which form a very significant part of global economic activity, and which cannot be understood from the simplistic perspective of seeing shareholders as a unitary body whose sole interest is value maximization. The classical agency view does not properly consider the multiplicity of views, risk profiles and time horizons of various actors, and thus fails to understand the role of the representative body, boards in companies, in determining how this complex web of interests is translated into a unitary decision-making structure capable of action.

#### **6.4. Implications for practice**

The role of the board in corporate governance has gained weight over the last twenty years, both through regulation as well as pressure from shareholders and media. Corporate governance codes regularly establish limitations for companies how to organize their board work. Boards need to have a majority of independent directors and independent experts serving as heads of audit committees, minimum gender balance is recommended or even mandatory in EU countries and the combination of roles of Chief Executive Officer and Chairman of the Board is either forbidden or discouraged. The list of regulations and recommendations is long and impressive.

However, governance rules focus on control and few of them consider how to improve the efficiency of board work. As Tuggle et al. (2010) show, a vast majority of board resources is devoted to regulatory affairs and information distribution, leaving little time for actual decision-making. This dissertation focuses on the concept of materiality, and its main practical significance arises from helping companies, their boards of directors, managements as well as creditors to understand how to improve their governance process through better allocation of resources on decisions most relevant to beneficiaries of such decisions. It is evident from the research material that currently boards have not given proper consideration to materiality, which issues and down to what magnitude they, as representatives of shareholders should control these decisions. Defining and disclosing limits of power increases board's accountability to shareholders, a target Roberts, McNulty and Stiles (2005) noted in their influential assessment. Better understanding of materiality will enable boards to use their limited time wisely, and increased accountability should improve the quality of decisions, leading to better representation of shareholder interest in corporate governance.

Ultimately, assuming the view that principal-representative-delegate model provides a more accurate image of corporate governance, it may impact the way corporate boards understand their role as representatives of shareholder interests. It may turn them into more accountable representatives, being better aware of how to use their extensive powers for value creation, in contrast to the classical image of boards as relatively impotent members of societal elite having little impact on how companies actually are being run.

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## **PART II ORIGINAL ESSAYS**



# **Essay 1**

## **Materiality in corporate governance**

An earlier version of this paper was presented in the 7th Conference on Performance Measurement and Management Control. Barcelona, Spain, September 18-20, 2013

## **Abstract:**

Materiality is one of the fundamental concepts in accounting. It has been extensively analyzed from *ex post* audit and legal perspective, but these provide little assistance to corporate boards and other decision-making bodies while determining when a matter is material enough to be subject to their decision control.

This paper analyzes how corporate boards define materiality in decision-making. It is based on hand-picked data from 600 largest European companies by market capitalization. A majority of these companies provide numeric information on decision thresholds set by corporate boards, limits when decisions must be subject to their authorization. These thresholds essentially define boards' understanding of *ex ante* materiality.

Materiality is analyzed from two perspectives, depth and width, depth referring to levels of decision thresholds as determined by boards while width refers to the scope of matters subject to hierarchical decision control. A reasonable benchmark for the most common threshold, median value for investment authority was found to be only 0.68 % of the market value of companies' equity.

Although descriptive by nature, this paper is linked to behavioral theories of decision-making by demonstrating that boards show traces of anchoring and loss avoidance in setting their limits of materiality. It also forms the basis for the subsequent essays in this dissertation.

**Key words:** materiality, decision control, board, anchoring, loss avoidance

## 1. Introduction

In essence, "materiality" means simply this: *if it doesn't really matter, don't bother with it*" (Hicks, 1964)

Boards decide on matters of material significance<sup>1</sup> is a boilerplate statement in corporate governance. However there is no commonly accepted definition on what is a material decision. As a concept it is related but separate from audit and legal definitions of materiality. It refers to ex ante decisions with unsure outcomes rather than ex post judgments on financial reports or disclosures thereof. How to define materiality in decision-making, and more specifically for boards in corporate governance is the subject of this study.

The concept of materiality is core to accounting and auditing (Messier et al. 2005, Edgley 2014). Auditors investigate financial reports, if they “give a true and fair view” and if “financial statements are free from misstatement of any material fact”<sup>2</sup>. The definition of audit materiality has been extensively discussed in academic literature (Messier et al 2005, Iskandar and Iselin, 1999, Holstrum and Messier 1982) and regulators have provided numerous instructions to accountants, auditors and users of financial statements (IFRS 2010, FASB 2010, SEC 1999). However, materiality still “has a fuzzy ontology that has constantly evaded precise codification in professional guidance” (Edgley 2014).

Materiality is a key concept also in securities law. Lawyers assess materiality primarily from the point of disclosure failure, if companies had failed to provide information that markets would have reacted on. The famous US Supreme Court definition<sup>3</sup> from 1976 relied on a mystic “reasonable

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<sup>1</sup> E.g. ABB Board regulations, October 21, 2011: “[Board shall have the duty and authority ...] to review and approve acquisitions, divestitures, joint ventures, liquidations and other transactions which are financially or strategically material to the business activities of the Company”

<sup>2</sup> Virtually identical statements are to be found from all audit reports. This example is from BT annual report 2012.

<sup>3</sup> “TSC industries v. Northway Inc” (1976)

investor” that determines the materiality of disclosure failure. It concluded that material information is something that would have significantly altered the total mix of information, impacting assessment of an individual investor. However, no concrete measure for legal materiality has been established, and Supreme Court has left it to individual courts to determine, the same way as accounting regulators have left it to individual auditors.

It is evident that practitioners would benefit from better guidelines for assessment of materiality. The problem is not limited just to ex post assessment of reporting and disclosure requirements, but it concerns also corporate governance, ex ante judgments which decision rights are material enough to be retained by a board and which delegated to management. Governance codes, such as the pivotal Cadbury Commission (1992), require that boards of directors should define what constitutes a material decision, subject to their decision control:

“4.24 We envisage that such a schedule would at least include:  
(a) acquisition and disposal of assets of the company or its subsidiaries that are material to the company; ... Boards should lay down rules to determine materiality for any transaction.”

Such information has become increasingly available in annual reports, corporate governance reports or separately disclosed board rules. Extant research has ignored this information even though it provides fruitful data not only on materiality but also on the inner workings of the boardroom.

The empirical part of this paper is based on board rules<sup>1</sup> of 600 largest European companies by market capitalization, and more specifically, the limits boards set on management decision authority. Board rules include a wide range of thresholds for materiality. Swatch Group AG requires that all investment in excess of 0.04 % of equity must be decided by the board<sup>2</sup>. The corresponding limit for EADS is 4.0%<sup>3</sup>. Not only do amounts differ, but also the variety of matters requiring board authorization. For example, Unilever

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<sup>1</sup> Matters reserved to the board, Terms of reference, Board charter, Board by-laws etc

<sup>2</sup> Swatch Group Annual Report 2011, page 134.

<sup>3</sup> EADS N.V. Internal Rules for the Board of Directors, last revision October 22, 2007

has defined nine monetary limits for board decision control, ranging from capital expenditure to contracts, litigation and pensions<sup>1</sup> while BP has none<sup>2</sup>.

Materiality in decision-making is proportional to the economic impact relative to the size of the deciding entity. Materiality is relevant for corporate governance, as boards as elected representatives of shareholders have only limited time and resources for decision-making. An average board in large European companies meets only 8 times per year, and regulatory affairs and information dissemination can take a large part of its time (Machold and Farquhar 2009). In order for governance process to have any impact, it is essential that the remaining time is reserved to issues that have a material importance to shareholders. Not only can the lack of definite limits lead to management-determined agendas (Useem and Zelke 2006), but badly defined limits may focus board work on insignificant matters and waste the limited time and resources of the directors. Boards may also omit important matters that they should consider, if such matters have not been included in the board rules.

This paper is conceptual and descriptive by nature. In order to investigate materiality in decision-making, it provides benchmarks and examples of limits of decision control that assist both researchers and practitioners better understand and apply the concept of materiality. Even though descriptive papers are not customary in accounting research, there are several examples of influential studies that are amongst the most quoted papers in corporate governance, such as Faccio and Lang (2002) or La Porta, Lopez-de-Silanes, Shleifer (1999), which both analyze cross-country differences in governance and ownership structures through simple cross-tables of observable phenomena. Similarly, descriptive studies are common in audit research on materiality. For example, Eilfsen and Messier (2015), assess materiality through internal guidance of eight major US audit firms.

Although this paper is descriptive, its analysis is based on theories related to decision-making. The starting hypothesis is that boards act rationally and we should be able to find commonalities in how yardsticks of materiality have been defined, both regarding the width of matters under board decision

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<sup>1</sup> "Governance of Unilever 1 January 2012", available on [www.unilever.com](http://www.unilever.com)

<sup>2</sup> BP p.l.c. Board Governance Principles.

<http://www.bp.com/sectiongenericarticle.do?categoryId=9021800&contentId=7040614>, accessed on 23.11.2012

control as well as at what level such thresholds are set, reflecting a universal understanding of what constitutes a material decision impacting shareholders. An alternative hypothesis is that decision limits are influenced by known behavioral traits, such as anchoring, boards finding “magic numbers” which define materiality, disregarding the type of decision and its potential financial impact, or loss avoidance, boards setting materiality thresholds for decisions related to direct losses lower than limits related to decisions potentially leading to outcomes with much larger economic impact.

There are two key findings to this study. First, empirical material provides reasonable benchmarks of materiality for boards. For example, the median threshold for the most common area of decision control, investments decisions has a value of 0.68 % of market value of equity, which is rather low compared to audit thresholds of materiality. Secondly, decision limits do not always form a logical whole, either they focus on just a few material decisions, or different limits are inconsistent in comparison to others. For example, boards seem to show traits of loss avoidance, as limits related to one-offs, such as legal settlements, are clearly lower than other thresholds of materiality. These results support the notion that materiality is not a universal concept but rather a subjective assessment of potential outcomes of decisions. Currently no commonly accepted yardstick for materiality for decision control in corporate governance exists, so a need for improved guidance is evident.

This paper is organized as follows. The second chapter starts with a brief discussion on theories of decision-making, followed by a review of the concept of materiality in audit and legal literature. In the third chapter, descriptive statistics of materiality in decision-making are presented, followed by detailed analysis thereof in the fourth chapter, before conclusions related to theory and practice are discussed in the final section.



## **2. Literature review**

### **2.1. Introduction**

In this chapter, we will first briefly discuss theories of decision-making, decision rules and thresholds. The chapter continues by reviewing the concept of materiality, how it has been defined and applied in accounting and related fields. This will lead to the empirical part that investigates the concept of materiality in corporate governance, and specifically in board decision control. Monetary limits are considered as the explicit definition of materiality

Materiality as a term does not seem to appear in corporate governance literature, either in general treatises such as Monks and Minow (2011) or Huse (2007), nor in a recent extensive literature review (Adams, Hermalin and Weisbach 2010), or it appears only within the discussion of ex post material misstatements. Thus the theoretical basis for materiality needs to be found in more general management literature.

### **2.2 Theories of decision-making**

Within the vast literature on decision-making, two key streams of research are considered as a theoretical basis for analysis on materiality. This essay analyzes materiality through decision rules set by boards of directors, and thus theories of rule-based decision-making form a natural theoretical basis for the article. On the other hand, besides rules as such, definition on materiality concerns how rule-setters define decision thresholds and the unique empirical data provides a possibility to assess what kind of behavioral bias, if any, boards show while setting such limits. The theoretical basis for this discussion arises from critics of rational decision-making, and more specifically, from the stream of behavioral decision-making literature starting from the now classic work by Kahneman and Tversky (1974).

March (1994), defines four different processes how decision rules are set. First, rules can be seen as conscious and rational assessment of rule-setters. Thus boards would set decision rules that are best suitable for internal characteristics of the company and the situation it faces in the markets. Further, March sees rules forming an agreement between the parties, which assumes that directors take into consideration the behavior of management as the subject of rules while determining which powers to retain and which to delegate. Secondly, according to March, rules can evolve through organizational learning, as outcomes shape adjustments to such rules. Rules may reflect not only the skills but also the level of experience of rule-setters. Thirdly, March argues that rules can also be based on fads, “follow-the-neighbor” policies, i.e. rules are set by copying other companies, and thus we should be able to observe a high level of similarity in how large European companies set their decision thresholds. Besides rational, experience and fad-based rules-setting, March also identifies evolution of rules based on changes on decision-makers, the study of which would require a longitudinal data in board context. Ocasio (1999) takes a similar approach to March in discussing institutional theory of action, arguing that both experience and learning guide corporate boards in their decision-making, however arguing that over time rules become institutionalized and difficult to change even if firm situation or competitive environment would require a revision.

An alternative approach arises from psychology-based theories of decision-making, and especially studies on decision traps. Kahneman and Tversky (1974) argue that people are subject to a number of heuristic principles which simplify complex decision-making situations into something which people with bounded rationality can handle. Considering the complexity of issues boards encounter, information gap between directors and management and uncertainty regarding outcomes of major decisions, decision rules may reflect such heuristic biases. Prospect theory (Tversky and Kahneman 1974, Pepper and Gore 2012) established that actual behavior of people in decision-making situations is not consistent across the spectrum of alternative outcomes. It argues that individuals are loss averse, and decisions to avoid losses have more weight than decisions leading to equal gains. Similarly, psychology literature has observed a negativity bias

in perception, individuals devoting more attention to negative than positive information (Pinsker et al. 2009). Tetlock and Boettger (1994) also saw accountability of decision-makers to be biased towards negative, or risk decisions, which in board context would indicate that boards weight their accountability to shareholders more heavily on negative than positive outcomes. Negative outcomes lead to more throughout processing, indicating that materiality thresholds should be lower for such decisions. Consequently, we should be able to observe lower thresholds for matters such as litigation or one-off write-downs.

A second potential behavioral bias is anchoring. It is evident that financial outcomes are different for investments, commercial agreements or legal claims of same numeric magnitude. A capable board should differentiate between these risks and find individual thresholds of materiality relevant to risks involved. A loss is definite, while business decisions have a much wider range of probable outcomes. Anchoring assumes that individuals follow an initial estimate even though information would imply that the relevance of an anchor is not universal (Tversky and Kahneman 1974, Pinsker et al. 2009). In the case boards use same or similar numeric values for different decisions, they demonstrate evidence of anchoring, considering materiality to be a universal measure disregarding the content. Acito, Burks and Johnson (2009) find that firms “follow thy neighbor” while determining materiality in correction of accounting errors. This can be seen as example of anchoring, companies following their peers in industries in determining what a material decision is and what is not. Correspondingly, if boards do not differentiate thresholds based on their probabilistic outcomes, they show traits of anchoring, relying on “magic numbers” across the limits of decision control.

Next, I turn to contextual analysis of materiality in accounting and legal literature.

### **2.3. Defining materiality**

Defining materiality, both regulators and academics have focused on the user of information, were she “reasonable investor” (US Supreme court

1976), “reasonable person” (FASB 1980), or “average prudent investor” (SEC 1999) or just “users of financial information” (IFRS 2010). Edgley (2014) notes that materiality is a “time-honored concept”, despite the fact that it has not been clearly defined. No definitions of materiality specifically tailored to ex ante decision-making seem to exist, although it is commonly referred to in rules, regulations as well as in every-day language. Already Cadbury Commission in UK required that boards should establish rules to determine materiality for any transaction (Cadbury 1992).

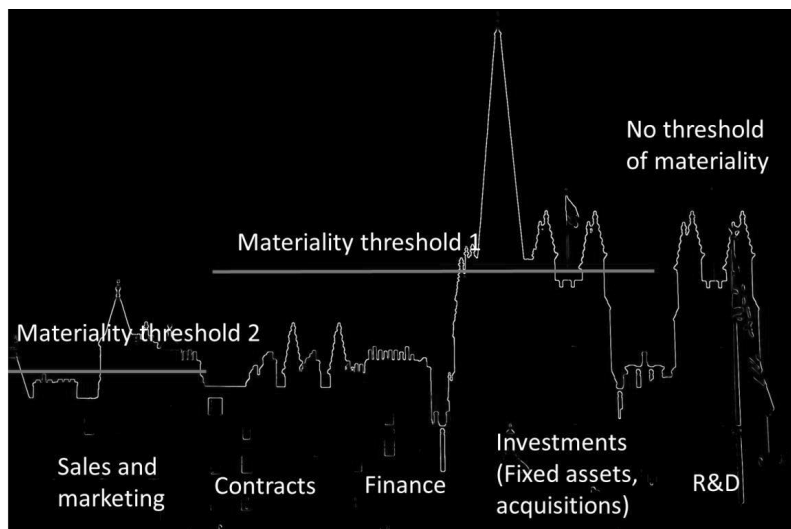
In line with audit approach to materiality, a material decision can be seen as a decision that impacts shareholder value. However, materiality in decision-making is an ex ante concept including uncertainty of outcomes. A material decision impacts the risk position of a company immediately, but its impact on cash flows will arrive only in the future. Materiality is also a relative concept, it depends on the level of hierarchy, boards having different thresholds from company or divisional management.

By enforcing a lower level of materiality than required by mandatory disclosure, boards in effect determine a set of decisions, which either separately or taken as a whole may create results that when reported, change the way a reasonable investor acts. In regulation there is a duty to disclose decisions (or events) that have a material impact to shareholder value, and only a small portion of board decisions are disclosed. Moreover, boards face uncertainty in their disclosure judgment, as outcomes are contingent to execution, competition and various external factors outside firm control. However, certain ex ante decisions are disclosed as made, and those can be considered of fulfilling a criteria of “super-materiality”, i.e. boards consider that the probability of them materially impacting future cash flows is so high that they must be disclosed.

Every decision made within a company has some kind of effect to shareholder value, each commercial offer, sales discount, product specification or accountant hire. Decisions are a continuum of materiality, and in reality, no clear-cut boundaries exist (Lo 2010). Materiality has two axis – depth and width. Depth measures the magnitude of decision, while width its scope. If depth of decision control is too low, boards become managements, and if they are set too high, boards are irrelevant as

representatives of shareholder interests. Width of decision control poses a problem of definition to boards – which areas of decision-making actually determine the future of a company, and if board has any capabilities to take a stand on those.

The complexity of decision thresholds can be illustrated through a metaphor of a city skyline (Picture 1), where buildings represent different areas of decision-making within a company. Some of the large buildings have a flat top, i.e. single decisions cannot be observed and thus they are not subject to hierarchical decision control, while others have sharp towers, even visible to outside observers. Boards define thresholds above which decision need to be subject to their scrutiny. There is no guarantee that boards draw the line on a same height for all items, nor is there a guarantee that decision control covers all relevant areas of decision-making.



In the illustration above, a company has defined two materiality thresholds, one that applies to investments, financial transactions and contracts, and another applying to sales and marketing. Although R&D decisions may be more material than investments, due to information gap, board has not established any limits to them. On the other hand, with special knowledge on sales and marketing, board wishes to be much more involved in the day-to-day decision-making on these subjects, imposing a lower level of materiality.

Figure 1 City skyline analogy of materiality in decision-making

Different meanings of materiality are further illustrated below. First (ex ante), a board makes a decision which is submitted to them due to thresholds set for materiality. Uncertainty leads to a large variety of potential outcomes, some of them material and some immaterial. Board needs to make a judgment if the decision is such that its outcome has a high likelihood of creating material consequences, thus leading to decision to disclose or not. On the other hand, reported actual outcomes (ex post) include accounting judgment, and management has a possibility to influence how the outcome is presented in financial statements. Auditors must assess if such a judgment creates a material misstatement and requires a correction before the financial statements are published.

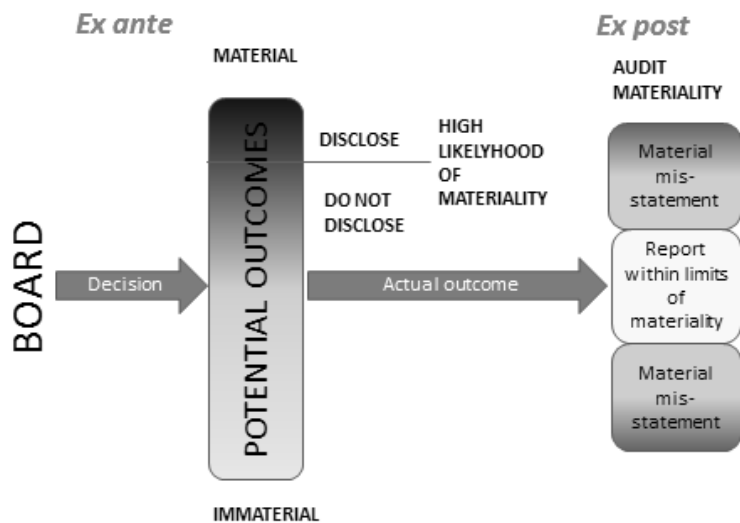


Figure 2 Ex ante and ex post materiality in decision-making and audit

Decision thresholds in corporate governance serve several purposes. First, they define a level of management disclosure that is lower than regulatory requirements. This should reduce investor risk related to management misbehavior. Secondly decision thresholds increase board accountability towards shareholders, as they can better observe director influence to

decision processes and outcomes thereof, which Tetlock et al (2013) call process accountability and outcome accountability. However, there are several firms that do not disclose their decision limits. Edgley (2014) argues that if materiality is not clearly defined, it leads to paternalism and mystification. Mystification is counterparty to transparency – the less transparent a board is the more mystic in its decision-making and the wider the information gap between shareholders and board. Moreover, a board may hide behind a generic concept of materiality, protecting its workings from outside assessment. A lack of disclosure creates mystery and supports board work as “art of management” (cf. Rose et al 1970).

#### **2.4. Thresholds of materiality in audit**

Both auditors and lawyers historically have struggled in defining a general definition of materiality, leading to variation in judgments in courts as well as by individual auditors (Bean and Thomas 1990). The focus of audit research on materiality is on the accuracy of financial information. Similarly to the legal definition, information is considered material if it impacts the economic decisions of the users of the information (Hicks 1964). Audit research is practice-oriented, attempting to find benchmarks for auditors to use. Weighty definitions have been provided by regulatory authorities, however, all of them leave the final judgment of materiality to boards and individual auditors, without providing any definite measurements to guide the practitioners. For example, discussing disclosure, IFRS defines materiality as follows (IFRS 2010):

Information is material if omitting it or misstating it could influence decisions that users make on the basis of financial information about a specific reporting entity. In other words, materiality is an entity-specific aspect of relevance based on the nature or magnitude, or both, of the items to which the information relates in the context of an individual entity's financial report. Consequently, the Board cannot specify a uniform quantitative threshold for materiality or predetermine what could be material in a particular situation

IFRS thus defines two general principles for materiality. It is seen as entity-specific rather than as a generic concept applicable to all companies through common thresholds. Secondly, IFRS considers both depth (magnitude) and

width (nature) of issue as relevant in determining materiality. Moreover, in the latest commenting round (IFRS 2015), IFRS board further concludes that it does not see a need to revise its materiality definition, although it confesses that the vagueness of definition has led to too little or too much information provided to investors.

In empirical studies on how auditors apply materiality in practice, impact on net profit is seen as the primary criteria (Iskandar and Iselin, 1999; Holstrum and Messier, 1982; Messier et al., 2005). More specifically, auditors commonly use the famous “five percent rule”, items that would change the reported net profit by 5 % are material enough that they need to be corrected in the financial statements before publication (Acito, Burks and Johnson 2009). U.S. Securities and Exchange Commission’s influential SAB99<sup>1</sup> guidance is generally supportive to the 5 % rule, but it highlights several situations of qualitative judgment where the mechanical application of the rule is not sufficient. Secondary criteria include impact on balance sheet as well as on sales, although both of these are related to the first. In the case balance sheet valuation is considered incorrect, the impact usually passes through P/L; equally adjustments to sales figures normally impact reported margins.

Empirical research on audit materiality suffers from low level of disclosure, as firms or auditors do not publicly reveal their criteria of materiality of mistakes to be corrected in financial statements (Keune and Johnstone 2009). Eilifsen and Messier (2015) approached this problem by studying internal materiality guidelines from eight major US auditing firms. They found that the thresholds for misstatements vary as follows

- a) 3-10 % of net income before taxes
- b) 0.25-2 % total assets
- c) 0.5-2 % of total revenue<sup>2</sup>
- d) 0.5-10 % of net assets (with major variations between firms)
- e) 2-5 % of EBITDA

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<sup>1</sup> Securities And Exchange Commission Staff Accounting Bulletin No. 99 , 2001

<sup>2</sup> One of the firms had a maximum of 5 % of total sales



f) 1-10 % of total equity

In addition, single accounting firms established thresholds based on gross profit, cash flow and total expenses. Even though the thresholds seem definite, some of the measures are related, and misstatement may be material based on one criterion but not on another. Multiple criteria unavoidably lead to judgmental issues and may fail to provide a firm basis of assessment<sup>1</sup>.

Moreover, all these measures are based on accounted values, and none on available market values. Considering that investors are the primary users of financial reports, this omission is perplexing, as outcomes of misstatements are reflected in valuation of shares. Even more perplexing is the observed difference in assessment of materiality between preparers of financial statements, auditors and users of such information, investors (Iskander and Iselin 1989). Cho et al (2003) investigated investor perceptions of materiality through market reactions to unexpected financial results, and arrived at values that are clearly below what auditors commonly consider material. Their assessment indicated that investors consider deviations of between 0.1 and 0.2 % of pre-tax income or between 0.025 % and 0.1 % of total assets as material enough to impact their judgment on company value, although the impact is quite limited, they found a mean abnormal 3-day cumulative return of only 0.15%. In fact, due to this discrepancy, auditors implicitly take a stand on what is a material market reaction to new financial information and disregard miniscule impacts even if they are abnormal.

In research on a related field, failures of disclosure and securities market law, studies have focused on investor protection, trying to define what information would have caused an informed investor to act in the financial markets or changed the market price of a security (Booth 2013). The US Supreme Court has defined materiality qualitatively as “substantial likelihood that the disclosure of the omitted fact would have been viewed by the reasonable investor as having significantly altered the “total mix” of

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<sup>1</sup> This is well recognized also by regulators: “depending on the circumstances of the entity, include categories of reported income, such as profit before tax, total revenue, gross profit, and total expenses; total equity; or net asset value. Profit before tax from continuing operations is often used for profit-oriented entities. When profit before tax from continuing operations is volatile, other benchmarks may be more appropriate, such as gross profit or total revenues” (AICPA 2012a, §320.A6)

information made available”<sup>1</sup> (Messier et al 2005), which leaves the responsibility of judgment of materiality to individual courts. In Europe, no common definition for legal materiality exists, and for example Chong and Venten (1994) find no consistency on the way UK courts interpret materiality in securities laws, asking for better guidelines from auditors. Besides lack of consistent thresholds, courts cannot rely on market reactions as an indication of materiality, as it would lead to endogeneity, the cases would not have been brought into courts in the first place if the new information had not impacted the securities prices.

As materiality is ultimately based on human judgment, behavioral factors may impact how thresholds are set. Keune and Johnstone (2012) study the role of managers, auditors and audit committees in determining what is a material misstatement. Their results imply that materiality is dependent on personal qualities such as director expertise, as more knowledgeable directors can better judge what is material for a company in a certain industry. In audit, auditor experience, age and other personal factors have an effect, as does audit firm size and object firm industry and size (Edgley 2014). Although audit firms establish their own guidelines of materiality which auditors can refer to (Eilifsen and Messier 2015), judgment of materiality is ultimately a decision by the responsible auditor.

Legal and audit materiality are interlinked, as both investigate the thresholds of material misstatements or failures to disclose. However, it is evident that auditors’ threshold of materiality should be lower than the one established by the courts, in order to self-protect auditors and audit companies from legal liability<sup>2</sup>.

### **3. Methodology and data description**

The empirical material of this study is collected from 600 largest European listed companies by market capitalization, as of 25.8.2012 (EuroSTOXX

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<sup>1</sup> “TSC industries v. Northway Inc.” (1976)

<sup>2</sup> The audit failures are more spectacular like in cases of Enron or Parmalat, but they are related to criminal misstatements and the inability of the auditors to prevent them rather than omissions of material facts

600). Although focus on larger companies may create a bias, the measurements are universal and should be applicable to any size of company. Large public companies are also under higher scrutiny by markets and regulators, have better resources for disclosure and reporting, and the personal liability of board members is higher, also creating an incentive for better disclosure.

Of the 600 studied companies, 325 disclose their internal board rules, and the 297 of these provide monetary thresholds for decision control. In total, the sample includes 1120 numeric thresholds of materiality. The material on companies has been collected from their websites, and includes annual reports, articles of association, corporate governance reports or statements and most importantly, rules of the board<sup>1</sup>. The numeric limits can be categorized in four major areas, investments, financial transactions, commercial agreements and technical matters like litigation, and each company may have more than one decision limit related to each area.

The financial data is collected from Orbis databases, using annual information for the accounting year that ends between 31.12.2011 and 30.12.2012. When needed, the database has been converted into the home currency of the company with the FX rates in force at the moment of closing, considering the different closing months of the companies. When pieces of information have been missing from Orbis, annual reports have been used. The accuracy of Orbis data has been controlled through random checks.

The sample companies have 17 different nationalities and 19 industries, all of them listed in countries belonging to or associated with European Union, providing a reasonable image of European corporate sector and investment markets. One of the founding principles of European Union is free movement of capital, which is further supported by union-level regulation. The sample companies are large and most of them operate across countries, their ownership is international as is their management and board. Consequently, this paper assumes functional convergence of companies in developed economies, in line with La Porta, Lopez-de-Silvanes, Shleifer and Vishny (2000), Hansmann and Kraakman (2001) and Hopt and Leyens

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<sup>1</sup> Rules of the board can have various names, matters reserved to the board, board charter, board by-laws etc. Sometimes board rules are included in other documents, like document de reference in France or regulatory corporate governance reports in Italy or Spain

(2004). Investors, boards and management are assumed to adapt their approach to decision management in ways to align the practices according to commonly accepted principles despite lack of uniform legal environment. Shleifer and Vishny (1997) and Hansmann and Kraakman (2001) have argued that the integration of global financial markets is driving the integration of governance practices, and national legal environments follow only with a lag. There is no evidence that either national or Europe-level regulation would give instructions how boards set decision thresholds. The shareholder as the primary beneficiary of governance forms the philosophical basis of the functional convergence and thus shareholder value based measurements form a natural yardstick for decision control in corporate governance.

This study focuses on the numerical decision limits determined by the board. Boards have an interesting self-regulatory role, as the rules are written by the boards themselves. Rules include lists of matters and clear monetary limits of authority that reflect the board's definition of materiality. The most typical limits are traditional, focused on investments (or acquisitions), even though purchases of fixed assets are not necessarily the most material decisions a company can make. Companies included in the sample define materiality in different ways. The most common, by far, is a monetary limit related to a specific decision. However, also proportional limits exist, relating decision limits to sales, equity or balance sheet total. In addition, limits related to business variables have been defined, such as physical measurement of contract values.

Monetary limits as such are not directly comparable, but this can be overcome by relating them to key financials. This paper relates monetary limits primarily to market value of equity. The higher the threshold, the fewer decisions require board approval and the less decision control the board retains. This approach differs from criteria of audit materiality, which typically relate material misstatements to accounted values of net result, sales or balance sheet. Market based measures have a direct link to shareholder value, as material decisions impact future cash flows and thus valuation in the market. For the sake of comparability, ex ante decision thresholds are also assessed against accounting-based figures. However, relating board decisions to firm market value provides a reasonable, if not

complete yardstick across companies, asking how much of shareholder value needs to be involved before board sees it as its responsibility to retain decision control rights, in order to properly represent shareholder interests. This measurement is not without problems, though. For example, it is evident that investment decisions differ in their level of risk, if they concern replacements of existing machinery or endeavors to totally new markets. Investments by start-ups are probably more risky than investments by established companies.

Table 1 presents the breakdown of the sample of 600 largest European companies by industry and by country. All of these companies published their regulatory information on their website, and the overwhelming majority of material was available also in English. There are some minor exceptions where parts of the material (board rules, articles of association or corporate governance statements) were only available in the native language, French, Spanish, Italian or German. In some cases, where only summaries in English were provided, the original full native language versions were used.

There are no significant anomalies in the division of companies or industries, but a few observations are worth commenting. Financial sector (banks, financial services and insurance represent 99 companies of the sample (16,5 %). Although certain financial ratios, such as net sales or balance sheet ratios differ between financial and other industries, there is no reason why market valuation as a yardstick would not apply also to them.

Table 1

Breakdown of sample by industry and by country (N=600)

Eurostoxx 600 stock index divides companies into 19 different industries. All of the companies are listed in countries either belonging to or associated with European Union, although a few have their headquarters in other countries. Countries are AT = Austria, BE = Belgium, CH = Switzerland, DE = Germany, DK = Denmark, ES = Spain, FI = Finland, FR = France, GB = Great Britain, GR = Greece, IE = Ireland, IT = Italy, LU = Luxembourg, NL = Netherlands, NO = Norway, PT = Portugal, SE = Sweden

Industry	Country																		TOT
	AT	BE	CH	DE	DK	ES	FI	FR	GB	GR	IE	IT	LU	NL	NO	PT	SE		
Automobiles & parts				6				1	4	1			2					14	
Banks	2	1	5	2	3	6	1	1	4	5	1	1	9			1	1	4	
Basic resources	1			2		1	2	1	15				1		1			28	
Chemicals		2	4	9			1	2	4						2	1		25	
Construction & materials			3	2	1	3	1	1	5	1	1				1			3	
Financial services			3	1		1			2	14		1						5	
Food & beverages		1	4	1	1	2			3	6	1	2	1		5	1		28	
Healthcare		1	7	6	6	1	1	1	3	6		1			1			3	
Industrial goods and services	1		9	11	2	3	5	14	36			1	4		8	1		104	
Insurance	1	1	5	3	2	1	1	3	10				1		3	2		33	
Media		1		3				7	10				1	1	2	1		1	
Oil & gas	1					2	1	5	12				2		2	6	1	1	
Personal & household goods			2	5			1	6	10				2					5	
Real estate	1	1	4	3				5	9						3			3	
Retail		2	2	2		2	1	3	9						1		1	1	
Technology			1	6			1	7	7			1			2			1	
Telecommunications	1	1	1	2	1	1	1	1	4			1			1	1		2	
Travel and leisure				1				3	14	1	2							21	
Utilities	1			2		5	1	4	7			4				1			
Total	9	14	50	67	16	28	19	82	180	3	8	30	1	32	15	5		41	
																		600	
																		25	

## 4. Findings and discussion

In this chapter, the concept of materiality is analyzed through limits of decision control defined by the boards. Such limits provide evidence on how boards operationalize their understanding what constitutes a material decision. Boards have no obligation to provide this data, but more than half of the 600 largest companies in Europe disclose their board rules, most of them disclosing numeric limits for materiality, investment limits (242 companies) being by far the most common. This material provides a unique publicly available database on human judgment of materiality, unavailable to researchers investigating misstatements in financial reports.

Table 2 presents the most important descriptive statistics of this study. There are four generic types of materiality thresholds, investments, commercial, financial and technical decisions, and the table below presents most frequent of them. For investments, not only capital expenditure, mergers and acquisitions and equity participations are individually analyzed, but investments are also considered as one large category, where the lowest of various investment thresholds is used. In addition, the distribution of materiality thresholds for key categories in finance (Borrowing), business transactions (Contracts) and technical decisions (Litigation) are presented below.

Table 2 Descriptive statistics of materiality thresholds for various decision types

	Min	Max	Median	Mean	Q1	Q3	STD	N
All investments	0,01 %	37,5 %	0,68 %	2,18 %	0,18 %	1,82 %	4,57 %	242
- Capex	0,01 %	30,6 %	0,66 %	1,93 %	0,24 %	1,72 %	3,68 %	190
- Mergers and acquisitions	0,05 %	30,6 %	0,82 %	2,24 %	0,29 %	2,19 %	4,21 %	160
- Equity participations	0,01 %	37,5 %	0,59 %	2,74 %	0,25 %	1,82 %	6,11 %	97
Borrowing	0,03 %	33,2 %	1,26 %	3,14 %	0,51 %	3,15 %	5,65 %	69
Contracts	0,01 %	35,7 %	0,86 %	2,75 %	0,41 %	2,57 %	5,23 %	56
Litigation	0,01 %	6,9 %	0,32 %	0,67 %	0,13 %	0,61 %	1,25 %	32

Before entering to specific analysis by subject of decision control, a few general comments need to be made. The dispersion of median values,

measured as the relationship of decision threshold to market value of equity of the firm vary between 0,32 % and 1,26 %, the lowest being with items related to potential losses, litigation, and highest for borrowing authorizations, which are probably the most technical of material decisions. Most categories included few very high observations, which could also be considered outliers, and this is reflected in the mean values, which are always higher than median values. Smallest values were only a few hundredths of a percent, indicating that some boards understand their role as making managerial decisions, rather than delegating necessary authority to operative organization.

#### **4.1 Investments**

Category all investments is a combination of materiality thresholds for different types of investment limits, choosing the lowest value. This ensures that technical discrepancies in the ways companies define what is an investment do not distort the results. Probably the most significant single benchmark arising from this study is the median value of investment limits, 0,68 % of market value of equity, meaning than for example a board with a market capitalization of 1 billion euros considers an investment of 68 million as material enough for its decision control, or similarly, market value of 10 billion would entitle a threshold of 680 million. Median is a more representative value than mean (2,18%), which is heavily impacted by very large values, which could also be considered as outliers. The total number of observations is 242, representing 40,3% of companies in the total sample. Half the observations were between 0,18 % and 1,82 % of market value of equity, which can be considered as a reasonable benchmark range, taking into consideration differences between industries and businesses.

In order to assess the relevance of these benchmarks, they can be compared with the Eilifsen and Messnier ranges of audit firm thresholds of materiality. As auditors do not consider market value based thresholds of materiality, we need to rely on accounted values for comparison. It needs to be remembered, though, that comparisons are not entirely relevant, as we are comparing ex ante materiality with uncertain outcomes to ex post assessment of



materiality of known past events. Median value of investment limit as of net sales is 0.60 %, which is within the range of 0.5 – 2 % in the Eilifsen and Messier (2015) study. In comparison to accounted equity, sample companies have a median value of 0,9 %, which is just below the lower range of 1% - 10 % established in their study. Median materiality threshold for balance sheet total was 0.30 %, which again is at the lower end of Eilifsen and Messier results (0.25% - 2 %). Thus materiality thresholds for decision control in large publicly listed companies seem to be at the low range, if not below materiality thresholds established by auditors.

Table 3 Comparison of materiality thresholds for investments against different benchmarks (N=242)

	Market value of equity	Book value of equity	Enterprise value	Net sales	Balance sheet total
Min	0,01 %	...*	0,01 %	0,01 %	0,01 %
Max	37 %	31 %	37 %	2500 %**	11 %
Median	0,68 %	0,90 %	0,56 %	0,60 %	0,30 %
Mean	2,18 %	2,17 %	1,68 %	12,5 %	0,71 %
STD	4,57 %	4,75 %	4,00 %	160,7 %	1,42 %

*\*Cable and Wireless had a negative book value of equity in 2012*

*\*\*The unusually high value for investment limit to sales is due to Porsche, which has practically no sales as all business in 2011 took place in partially held companies, accounted through equity method*

In order to further consider validity of results, investment limits can also be calculated for various industries, countries and dominant ownership types. A dominant owner is defined as a largest shareholder than controls more than 10 % of the voting stock of a company. Dominant owners were categorized into four groups, companies where a family is largest shareholder, state-dominated companies, companies with other type of clearly identifiable dominant owner, consisting of smaller categories such as foundations, investment companies or other enterprises, and the final category which consists of companies without a dominant owner. It is evident from table 4 that ownership type has little relevance for determination of materiality, as median investment limit were practically identical.

Table 4 Investment limits and ownership types

	<b>Median</b>	<b>STDEV</b>	<b>N</b>
Family	0,68 %	4,97	51
State	0,60 %	1,66	30
Other	0,86 %	3,90	55
Widely held	0,60 %	5,54	106
<b>Total</b>	<b>0,68 %</b>	<b>4,57</b>	<b>242</b>

There is more variance when investment limits are investigated against industries. Highest median values were reached for Technology (2.19) and real estate (2.18), but there is no clear pattern, so that for example, more investment intensive industries would be different from services, and as sample sizes are quite small, main conclusion to be reached is that materiality is not or is only weakly industry-dependent.

Table 5 Investment limits by industry

	<b>Median</b>	<b>N</b>
Automobiles & Parts	2,06 %	7
Banks	1,64 %	18
Basic Resources	0,76 %	10
Chemicals	0,46 %	15
Construction & Materials	1,00 %	10
Financial Services	0,95 %	9
Food & Beverages	0,41 %	12
Healthcare	0,19 %	12
Industrial Goods & Services	0,52 %	41
Insurance	1,69 %	13
Media	1,00 %	12
Oil & Gas	1,11 %	10
Personal & Household Goods	0,31 %	11
Real Estate	2,18 %	14
Retail	0,18 %	9
Technology	2,19 %	10
Telecommunications	0,62 %	7
Travel & Leisure	0,61 %	9
Utilities	0,58 %	13
<b>Total</b>	<b>0,68 %</b>	<b>242</b>

Looking at materiality thresholds by country (Table 6), of the large countries with significant number of observations, Great Britain (0,39 %), Germany (0,46 %) Switzerland (0,44 %) are clearly lower than two large Latin countries, France (1,53 %) and Italy (1,64 %). However, the two other Latin countries from Iberian peninsula have a low threshold average (0,11% and 0,49%) while Ireland (1,04) has the third highest, so thresholds of materiality do not seem to be systematically dependent on the country of listing.

Table 6 Investment limits by country of listing

	<b>Median</b>	<b>N</b>
BE – Belgium	0,79 %	7
CH – Switzerland	0,44 %	23
DE – Germany	0,46 %	22
DK – Denmark	0,21 %	1
ES – Spain	0,11 %	5
FI – Finland	0,12 %	1
FR – France	1,53 %	65
GB - Great Britain	0,39 %	54
IE – Ireland	1,04 %	2
IT – Italy	1,64 %	25
LU – Luxembourg	0,19 %	1
NL – Netherlands	0,70 %	22
NO – Norway	0,39 %	4
PT – Portugal	0,49 %	2
SE – Sweden	0,25 %	8
<b>Total</b>	<b>0,68 %</b>	<b>242</b>

#### **4.2. Mergers and acquisition limits**

160 companies had determined a limit for *mergers and acquisitions* that required board approval. In most cases, the limits were the same as for fixed asset investments, and thus average, median and quartile values were not materially different from investment limits. Out of these companies, 22

defined the limit either as a proportion of accounted total equity (20 cases) or total balance sheet (2 cases).

In case there was a comparable limit for fixed assets investments, for the majority of cases board threshold was set at the same level as capital expenditure limit, but in 10 cases acquisition limit was set higher and in 10 cases lower. Thus it can be concluded that boards consider the risks related to acquisition outlays to be on the same level as any other investment.

As an example, Symrise AG, a German chemical company has an acquisition limit that is five times that of fixed assets.<sup>1</sup>

*The acquisition and sale of businesses and of shares in businesses as well as every other disposition or encumbrance of shares in companies shares, provided that the value of the business or company (defined as the purchase price plus the net financial liabilities) exceeds an amount of either EUR 25 million or of EUR 10 million if, in the latter case, the transaction has not been provided for in the annual budget which was approved of by the Supervisory Board,*

*... the acquisition and sale of fixed tangible assets if the value of the investment or disinvestment exceeds an amount of EUR 5 million*

Taylor Wimpey PC; a UK company in personal and household goods has set a lower limit for acquisitions than for fixed asset investments<sup>2</sup>

*5.2 Contracts which are material strategically or by reason of size, entered into by the company or any subsidiary in the ordinary course of business, including:*

*...*

- acquisitions, abnegation or disposals of fixed assets above £20million;*

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<sup>1</sup> Rules of Procedure for the Executive Board of Symrise AG, 2011

<sup>2</sup> Taylor Wimpey Schedule of Matters Reserved to the Board,

*5.3 Contracts of the company or any subsidiary not in the ordinary course of business, major acquisitions or disposals on non-contested terms with an acquisition cost, including the assumption of debt, exceeding £10 million.*

Both of these companies have defined acquisition limits as debt-free value of companies, in line with standard valuation models. Some companies leave the definition vague, such as Vopak N.V, a Dutch company in industrial goods and services which requires that executive board must submit following decisions to supervisory board approval<sup>1</sup>, where acquisition thresholds are defined differently (“consideration”) from divestment thresholds (“book value”).

*e2) an acquisition of a participation in another company with existing activities, to the extent the consideration thereof exceeds EUR 15 million, and the divestment or reduction of such participation to the extent the book value of such participation to be divested exceeds EUR 15 million;*

*f1) capital expenditures (including capital leases) in replacement - and/or expansion investments regarding existing activities to the extent these are included in the annual capital budget and exceed an amount of EUR 20 million;*

These examples highlight the difficulties of defining benchmarks of materiality in mergers and acquisitions. In order to calculate them in a consistent manner, calculation methods would need to be more standardized

#### **4.3 Other investment limits**

104 companies defined a specific limit for *equity participations*, i.e. investments in companies that might not lead to acquisition of majority

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<sup>1</sup> Rules of the Executive Board of Koninklijke Vopak N.V., approved by Supervisory Board on April 26, 2010

ownership, indicating that boards consider unusual ownership arrangements as something that requires closer board scrutiny, potentially as they may involve uncustomary governance arrangements and restrict the powers of directors. *Disposal* limits were defined by 144 companies, primarily as a symmetric counterparty to acquisition limits. Boards see acquisitions and disposals as two sides of the same coin, and use similar criteria in assessing their materiality.

An interesting exception to the rule were *real estate* investments, which had a separate limit in 51 of the companies. While capex, acquisitions and divestments generally followed the similar materiality thresholds, limits for real estate transactions were clearly lower for 20 % of companies, while only 3 companies allowed management to make real estate investments of higher value than normal capital expenditure. The rationale for considering real estate investments as of higher risk is somewhat of a mystery, and may rather be due to the public nature and transparency of such transactions (e.g. notarization) rather than risk considerations. Real estate thresholds may reflect a legalistic or formalistic approach to decision control rather than an approach based on economic impact of decisions. As an example, Air Liquide S.A, a French company in chemicals industry defines following decisions requiring prior authorization by board of directors<sup>1</sup>

*of real estate for an individual amount in excess of € 80 million or for an annual cumulative amount in excess of € 150 million.*

...

*commitments to invest in or acquire equity investments or assets, consisting of immovable or moveable property, tangible or intangible, which will be listed under "Fixed Assets" on the balance sheet, or to subscribe to share capital increases, for an individual amount in excess of € 250 million or for an annual cumulative amount in excess of € 400 million.*

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<sup>1</sup> Air Liquide, Internal regulations of the board of directors May 2011

#### 4.4. Financial limits

Creditors regularly require a formal board authorization as a proof that a credit agreement can be duly executed, however, 83 companies had defined a specific threshold below which management could independently raise debt. In addition, 20 UK companies had defined a borrowing limit board cannot exceed without shareholder authorization. Such authorizations do not seem to exist in other European countries<sup>1</sup>. For example, Centrica, a UK utility company defines such a limit in its Articles of Association as<sup>2</sup>

*The directors must limit the borrowings of the company and exercise all voting and other rights or powers of control exercisable by the company in relation to its subsidiary undertakings so as to ensure that the total amount of the group's borrowings does not exceed an amount equal to the greater than £5,000,000,000 and three times the company's adjusted capital and reserves. This affects subsidiary undertakings only to the extent that the directors can do this by exercising these rights or powers of control.*

The magnitude of board delegation of financing rights was materially higher than for investment limits. In cases where these two limits could reasonably be compared, the average multiple of management credit authorization to investment authorization was 3,2 while median value was 2. Management leeway in negotiating credit arrangements for companies is thus much wider than the authority for making investments or acquisitions. This can be interpreted as recognition that credit is usually a consequence of other decisions rather than an independent business decision itself.

A few boards had other finance-related thresholds as well. Six boards had defined a *threshold for loan period* in addition to credit limits, typically allowing management to raise debt without limits for periods of up to 1 year. This may reflect an idea that short term credit is related to working capital management, and thus tighter control would not be proper use of board

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<sup>1</sup> Numerous companies do not, though, disclose their Articles of Association on their websites, to this conclusion is somewhat uncertain.

<sup>2</sup> Centrica Articles of Association, adopted May 10 2010

time. 59 boards had defined a limit for *third party guarantees*, which is effectively another type of credit risk limit on behalf of other companies. Most of these cases were related to industries where size of projects is large and customers may require financing in order to be able to place orders, in industries like oil and gas, utilities or engineering companies. For example, EADS, European aeronautics company limits CEO authority of contingent liabilities as follows:<sup>1</sup>

*.... to grant the CEO the authority to allow credits to third parties as well as to grant sureties or to accept guarantees or to give similar undertakings for liabilities of third parties not consolidated within the EADS Group insofar as the respective value of each such measure exceeds euro 100,000,000*

On the other hand, very few boards had set separate limits for *market risks*. 8 companies had defined a foreign exchange limit and 5 firms disclosed limits for other off-balance-sheet items. It is difficult to interpret this any other way than boards struggle with highly technical matters, such as limits related to financial risks. Moreover only one financial services company and no banks or insurance companies had a limit for financial risk, despite the high relevance of such risks in financial institutions. Of course, companies may have treasure policies that include various limits not disclosed to shareholders, but considering highly public failures in managing market risks, this lack of board attention indicates restricted technical understanding of materiality of non-traditional risks in business. It needs to be noted, though, that annual reports typically include sections of market risk management, which provide plenty of information to investors, but boards do not seem to take direct accountability rather leaving the responsibility to operative management and technocrats.

Financial limits can take a form of limiting size of transactions, such as for Evraz Plc, a UK company in basic resources<sup>2</sup>

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<sup>1</sup> European aeronautic defense and space Company EADS n.v., Internal rules For the Board of directors, October 22, 2007

<sup>2</sup> Schedule of matters reserved for the board of Evraz plc, approved by the board of directors of Evraz plc on 14 October 2011



*Contracts of EVRAZ plc or any subsidiary not in the ordinary course of business, for example loans, guarantees and repayments above USD 50 million; foreign currency transactions above USD 50 million; major acquisitions or disposals above USD 50 million.*

Or limits for the total foreign exchange position, as for Unilever N.V.<sup>1</sup>

approving policies in respect of the hedging of net instrument exposures, the hedging ( or leaving unhedged) of net equity balance sheet exposures of up to (or exceeding) €5 billion per currency or any other financial derivative exposure.

In addition to aforementioned financial limits 18 groups had defined board limits for intragroup financing, which may reflect lack of trust for internal control, and 10 companies had a specific threshold for leasing transactions. In practice, leasing being just another form of external financing, treating it separately makes little sense and may indicate lack of financial market expertise in boards.

It needs to be noted that banks and other financial institutions have relatively few disclosed limits of board decision authority, which may have interesting implications. In few other industries hierarchical decision-making is as natural as in banking, and various clearly specified levels of decision authority are already a regulatory requirement. However, the boards seem to have less role in actual decisions than in other industries, indicating that their role is rather supervisory than managerial.

#### **4.5. Operative decisions**

A third area of board decision control concerns actual *business decisions*. 64 companies had defined a monetary limit for contracts that management is allowed to sign without board authorizations, such as Ahold N.V, a Dutch

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<sup>1</sup> Governance of Unilever, 1 January 2012

retail chain, which requires executive board to submit following contracts to supervisory board approval<sup>1</sup>:

*... any programs, facility or contracts, (which include but are not limited to borrowing and Investment facilities and bond debt programs), with a term of more than one year, which are not included in the annual budget and exceed a value of EUR 250 million;*

In case where these limits could reasonably be compared to investment limits, they were on average 3.1 times larger, although median value was 1. A large number of boards had defined equal decision limits for investments and business contracts, even though their risk implications are quite different. This may reflect what behavioral theorist call anchoring, defining a generic numeric value that needs to be brought to board attention, without consideration of actual risks related thereof. Such simplistic rules clearly show limited ability of boards to define the width of matters relevant enough for their attention, rather limits acting as “fishing nets” collecting both relevant as well as irrelevant matters for board to consider.

The challenges for defining the width of matters requiring board attention is also reflected in other decisions with determined decision limits. Only very few companies have defined limits for specific business decisions, such as maturity of contracts (15 firms), IT projects (2 firms), “projects” (11 firms) and energy contracts (3, out of which 2 for utilities, defined as megawatts rather than monetary values).

Generally, decision control on other business decisions besides investments and acquisitions are far less frequent. Considering that decisions such as marketing campaigns, product decisions or human resources might be much more relevant than traditional investment decisions, they are only implicitly present in boards’ consideration for what is a material decision. This would imply that not only boards spend too much time on regulatory matters and information dissemination, their agendas may focus on personal expertise

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<sup>1</sup> Koninklijke Ahold N.V. Charter of the Corporate Executive Board, Effective as of January 4, 2010

of board members, and a diversity thereof could increase the scope of board authority. However, many of these subjects may be covered by regular budget or strategy processes, though with limited transparency, it is difficult to observe board involvement in such decisions.

#### **4.6. Technical decisions**

The fourth area of board decision control relates to “technical” one-off decisions, litigation being the most frequent (33 companies). Actelion, a Swiss healthcare company, defines litigation threshold in matters reserved to board decision as follows:<sup>1</sup>

*the initiation and settlement of judicial and administrative proceedings and disputes exceeding CHF 10'000'000 dispute value.*

On the other hand, they may be a part of overall limit of authorization, such as in Casino S.A, French supermarket chain<sup>2</sup>

*The Chief Executive Officer must therefore obtain the Board's prior authorisation for the following transactions representing over five hundred million euros (€500,000,000), including but not limited to:*

- *investments in securities and immediate or deferred investments in any company or business venture,*
- *sales of assets, rights or securities, in exchange for securities or a combination of securities and cash,*
- *acquisitions of real property or real property rights,*

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<sup>1</sup> Organizational rules (the "by-laws") of Actelion Ltd, 27.11.2010

<sup>2</sup> Casino S.A 2011 registration document, p 214

- *purchases or sales of receivables, acquisitions or divestments of goodwill or other Intangible assets,*
- *issues of securities by directly or indirectly controlled companies,*
- *granting or obtaining loans, borrowings, credit facilities or short-term advances,*
- ***agreements to settle legal disputes,***
- *disposals of real property or real property rights,*
- *full or partial divestments of equity interests, - granting security interests.*

The median value of litigation limits in the sample is only half of investment limits. It is somewhat unclear from limits if they concern dispute value (Actelion) or settlement value (Casino), so the materiality is difficult to assess. In a few cases, companies had also established limits for what can be considered as “one-offs” such as tax settlements (3 firms), restructuring provisions (9 firms) or credit losses (3 firms), but as such cases are very few, it is impossible to draw conclusions out of such thresholds. More interesting is, though, that one-offs are included in only few board rules, and thus they are brought to boardroom based on management judgment, which may be a problem, as management may be inclined to hide or split uncomfortable losses for failed business decisions if board does not impose their disclosure.

A closer look at litigation and other direct loss thresholds also reveals traits of loss avoidance. Out of the 33 companies establishing litigation limits, 14 have set it lower than investment limits, on average at 37 % of lowest limit related to investment decisions. For example, Sainsbury Plc requires board approval<sup>1</sup> for

*Any commitment or series of related commitments (including acquisitions and disposals and commitments for lease) where the projected expenditure or proceeds exceed £60 million or any other material commitments not included in the annual capital budget.*

But on the other hand board needs to approve

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<sup>1</sup> Schedule of Matters Reserved to the Board of J. Sainsbury Plc, as of November 1, 2011.

*Prosecution, defense or settlement of litigation involving a claim or series of related claims exceeding £5 million.*

In addition one company has disclosed a litigation limit but no other monetary limits of board decision control<sup>1</sup>. 15 companies have set the limit at the same level as investments and only 3 on a higher level<sup>2</sup>. This would indicate that almost half of the boards show loss avoidance and thus behave in line with prospect theory, establishing decision thresholds for direct losses at lower comparable levels than for more uncertain business decisions. In addition, the few limits for tax write-downs and loan losses seem to follow levels of litigation thresholds.

## **5. Discussion**

The empirical analysis provides plenty of benchmarks and tools for practitioners how to improve board efficiency. However, from theoretical perspective, a few key observations regarding the framework can be made. The first hypothesis was that boards have intentional rationality while setting their decision rules. The large variety in the width and depth of decision thresholds indicates that boards clearly consider the firm-specific circumstances in consideration while determining which issues are material enough to retain decision control. However, the strong focus on investment-related decisions casts doubt on this conclusion, as by far the most frequent decision limit boards determine was related to clearly identifiable long-term commitment of funds, while it is evident that there are numerous other material decisions impacting shareholder value that boards do not include in their formal authority. Thus the depth of decision limits supports the first hypothesis, while lack of width supports the opposing hypothesis, boards

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<sup>1</sup> IMI Plc, a UK company in industrial goods and services has disclosed only a litigation limit of 20 million GBP.

<sup>2</sup> Actelion, a Swiss company in healthcare specifically determines that CEO has the authority for “the initiation and settlement of judicial and administrative proceedings and disputes exceeding CHF 10’000’000 dispute value”, while the investment authorization is only “individual capital expenditure items/projects, including IT, over CHF 3’000’000 if these are not included in the annual capital budget, over CHF 5’000’000 if included in the annual capital budget”.

following each other in determining that investments are most important decisions boards can make.

The second set of hypotheses was related to behavioral biases in setting decision thresholds. It was assumed that traces of anchoring and loss avoidance would be found from board rules, and although no strong conclusions can be made from the limited evidence, numerous boards established decision limits based on “magical numbers”, in a manner consistent with anchoring, directors determining a number that was “material”, and applying it without further refinement in several decision categories, disregarding their risk and size of potential economic outcomes. Clearly, directors have difficulty to assess the impact of their decisions, and need to rely on simplified rules as also proposed by Marsh (1994). In addition, decision thresholds related to direct losses, such as legal settlements were generally on a much lower level than other decision limits, which supports the hypothesis that boards show traits of loss avoidance in their decision control. This may also be related to board accountability, in line with prospect theory, losses have a higher perceived negative utility than gains of a similar magnitude. In case shareholders show the same heuristics of loss avoidance, their assessment on board is weighed more on negative outcomes rather than positive ones, motivating boards to hold tighter control on decisions with clearly negative consequences.

The cross-sectional data does not allow for dynamic interpretation of results, and thus the learning and institutionalization hypotheses of Marsh (1994) and Ocasio (1999) cannot be investigated in this study. However, a future longitudinal study of decision rules may open interesting avenues to further analysis how decision rules change over time.

## **6. Conclusions**

The descriptive part of this paper attempted to answer the question “What constitutes a material decision?” especially in board and corporate governance context. The data is based on 600 largest European companies by market capitalization and may thus create a bias for interpretation of

results. However, the analytical conclusions are universal, and although thresholds are set on different heights on various levels of organization, basic methods of measurement remain the same. Thresholds are important for corporate governance, as they define the boundaries of power between the board and management. Analysis of board rules provides fresh insights not only materiality but further insights to the unanswered question of what happens in the black box of the boardroom.

The empirical part of this paper considered market value of equity as the best available yardstick in assessing materiality of decisions. There were two key findings. First, the median threshold of materiality for the most common decision assigned a materiality threshold, investments, had a threshold of only 0.68 % of the market value firm equity, which was at the lower end of thresholds set by auditing companies. Secondly, boards often show traits of loss avoidance in determining materiality thresholds for direct losses, and “magic numbers” exist as common measures for materiality. However, currently no commonly accepted yardsticks for materiality for decision control in corporate governance exist, although a need for improved guidance is evident.

The theoretical framework of the paper arises from decision-making theories. It provides novel support to heuristic biases also boards encounter while setting their rules. Directors are part of societal elites, and they usually have very strong qualifications based on their skills and experience. However, as decision-making bodies, their ability to make relevant sets of decision rules seems to be hampered by traditional heuristic biases such as follow-thy-neighbor, anchoring and loss avoidance. Further in-depth case studies might increase our understanding what are the processes how these rules are actually set, which may also help us develop theories of rule-making and decision-making by societal elites representing a large number of ultimate beneficiaries.

The results are relevant for standard-setters as well as practitioners. This is the first study providing systematic evidence on how boards determine materiality in decision-making, allowing regulators to provide better guidance to companies determining their corporate governance arrangements. It is also evident that practitioners should find value from benchmarking information provided in this study. The variations of size of

limits (depth) and differences in the range of issues (width) considered material was large, and the majority of boards had focused only on traditional investment-related decisions to be subject to their explicitly determined control.

What the rules don't catch is the impact of qualitative decisions. The two main ones, choice of CEO and determination of strategy are not directly measurable, and they are included in all board rules and thus cannot be controlled. Material decisions should anyhow have a link to strategy, non-material decisions by definition have only limited impact on the financial outcomes of the company. Another limitation arises from the subjective nature of judgment, boards consist of individuals with their personal risk preferences, and it would be important to analyze the process how boards as teams have arrived to these thresholds of materiality.

Concept of materiality in decision-making and corporate governance opens up several avenues for future study. In-depth analysis of threshold setting would require either case studies or surveys that would reveal the inner logic of decision control. On the other hand, materiality is a pervasive concept throughout the organization, and internal rules cover various levels of hierarchy. A better understanding of the concept of materiality would thus also benefit researchers of management control.



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## Essay 2

### Representation, Accountability and Disclosure

- A Principal-Representative-Delegate Model of Corporate Governance

This paper was presented at the EAA TALENT WORKSHOP in Madrid, November 6-7, 2015

## **Abstract**

This essay introduces representation theory into corporate governance. In order to better understand the intermediary role of the board of directors, the relationship between shareholders and directors is seen through representation and accountability as the distinct role of board does not well correspond to standard postulates of agency theory, incentives and control. This refinement of classical agency theory is called Principal-representative-delegate model of governance.

Representation theory sees trustee and delegate as the two basic forms of representation. In the first, representatives (board of directors) act on their own judgment as trustees, distancing themselves from shareholders after they have been elected, while in the second, boards more truly attempt to reflect the opinions of their electors, acting as delegates. Both characteristics of representation are present in large European companies, role of trustee being connected with companies with diversified shareholding, while in companies with clearly identifiable dominant shareholders boards rather act as delegates, providing less information to all shareholders, essentially having face-to-face accountability towards largest owners.

Principal-representative-delegate model is relevant to how corporate representatives are elected. Back-room negotiations leading to proposal of candidates is opaque, and does not guarantee a true representation of preferences of the whole shareholder base. Also, if we see top management as delegates rather than independent agents, we need to ask if compensation systems built on selfish assumptions of agency theory, predominantly using incentives as a source of motivation, are appropriate for a management that has limited authority and accountability shared with directors.

**Key words:** Representation, accountability, disclosure, board

## 1. Introduction

Shareholder value maximization as a unitary goal is one of the largest myths in corporate governance. It is a basis of the classical agency theory (Jensen and Meckling 1976, Fama and Jensen 1983, Schliefer and Vishny 1997), fundamental theories in corporate finance (e.g. Modigliani and Miller 1958) and starting point for legal analysis on governance (e.g. Hansmann and Kraakman 2001). However, reality is different. Investors are not a homogenous group. They have different preferences, risk profiles and time horizons that lead to various alternatives on how to strive to reach this mythical goal<sup>1</sup> (Aguilera 2005, Connelly et al. 2010, Cronqvist and Fahlbrach 2009). For example, Ilmarinen, a pension insurance company managing over 36 billion of assets<sup>2</sup>, one of the largest institutional investors in Finland writes in its investment policy<sup>3</sup> that it “considers it important that commercial and industrial activities in Finland remain competitive” and “the companies it owns must ... comply with UN Global Compact”. On the other hand, BlackRock, currently the largest fund manager in the world, states in its governance principles<sup>4</sup> “We do not see it as our role to make social, ethical or political judgments on behalf of clients”. It is evident, that these policy principles reflect different approaches to shareholder value maximization.

Moreover, how these different interests transfer into corporate actions is a question current theories of corporate governance fail to respond adequately. Classical agency theory has only two actors, shareholders and management (Jensen and Meckling 1976), and it is based on carrot and stick, with little consideration on if and how shareholder preferences are actually reflected in corporate decisions. Researchers and practitioners routinely consider boards as shareholders’ agents (see e.g. Reeb and Zhao 2013, BlackRock 2014) even though their relationship does not fulfill the basic

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<sup>1</sup> This approach is related to the concept of equifinality, which assumes that there are several routes towards the same goal, and it is virtually impossible to know in forehand, which of the routes is the optimal to be chosen. Corporate governance is a method of determining how companies ex ante approach goal of shareholder primacy, although it does not provide answers ex post what would have been the outcomes if alternative routes would have been chosen.

<sup>2</sup> 36.412 million euros as of 30.6.2015, [www.ilmarinen.fi](http://www.ilmarinen.fi)

<sup>3</sup> Ownership Policy, approved by Ilmarinen Board of Directors December 18, 2014

<sup>4</sup> Global Corporate Governance and Engagement Principles, June 2014

characteristics of agency relationship, incentives and control. Although market-based routes of influence from shareholders to management exist (e.g. Becht et al. 2009), direct links between the vast majority of shareholders and management are very few, and the most regular and structured route is via elected representatives of shareholders, board of directors. This indirect route consists of two distinct relationships, both of which need to be analyzed separately.

Applying theories of representation and legitimacy (Pollak et al. 2009), we can define corporate governance as a means of creating a unified company decision-making mechanism by transforming unorganized multitude of shareholder preferences into an organized structure, which is capable of action. Consequently, governance can be seen consisting of representation and delegation, creating a structure whereby a very large number of beneficiaries are represented by elected few, which are further responsible for decision control, delegating necessary authority to operative decision management for day-to-day running of a company (Fama and Jensen 1983). This can be called principal-representative-delegate model of governance, where shareholders are seen as principals, board as representatives and management as delegates. Principal-representative-delegate model contributes to agency theory by separating a dualistic shareholder-manager agency model into a more refined model consisting of two different relationships, one between shareholders and board, and another between board and management.

Corporate representation is based on ownership, voting power being determined by number of shares held<sup>1</sup> while the foundation of political representation is universal suffrage<sup>2</sup>. Corporate representation does not follow national boundaries, while political representation is usually strictly territorial. Companies may have formal (legal) domicile, but real domicile for large corporations is diffuse, as their ownership, management, operations and governing bodies are often international. This also implies that governance research founded on national boundaries is inadequate for large publicly listed international companies, similarly to evolution in

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<sup>1</sup> The question of different classes of shares is left outside this paper, although it offers an interesting avenue for future research on corporate representation.

<sup>2</sup> Universal suffrage is actually quite a recent innovation, prior to 20<sup>th</sup> century political representation was based on gender, class, wealth or race.



political governance, where elections are still primarily national, but decision-making has increasingly shifted from nationally elected parliaments to multinational bodies, such as European Union (Grant and Keohane 2005).

Representation theory is well developed in political science. The central question is if the role of a representative is to act on her independent judgment or on preferences of her electors (Pitkin 1967). The same question can be asked in corporate governance, should directors be independent from the opinions of their electors, or should they rather represent preferences of clearly identifiable shareholders (Verstein 2012). Representation as a concept is sparsely used in governance literature, i.e. classical works by Jensen and Mecklin (1976), Fama (1980), Fama and Jensen (1983), Eisenhardt (1989) or Schlieffer and Vishny (1997) do not use the term at all, or influential surveys (Hermalin and Weisbach 2003, Adams, Hermalin and Weisbach 2010) use the term only in discussing external stakeholder (labor, creditor) representation in boards, but there is little discussion of representation by various types of shareholders or shareholders with different preferences. Representation is a universal idea, most famously defined by Pitkin (1967), as creating presence of something or somebody that is not physically present. The fundamental challenge of corporate governance in publicly listed companies is the same, how to represent the interests of a large number of distant beneficiaries, whose ability to express their interests is limited and whose preferences are difficult to determine.

In this paper, disclosure is used as a lens to understand how representation actually works. Management disclosure has been extensively researched (see e.g. Verrecchia 2001, Beyer et al. 2010), but literature on board disclosure is practically non-existent, even though European corporate governance rules mandate companies to disclose plenty of information on boards and their members<sup>1</sup>. However, regulations leave vague what boards should disclose on their inner workings, leaving it up to companies

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<sup>1</sup> Information on boards can be found on several documents. Annual reports include chapters on governance, and sometimes companies provide a separate governance report, such as in Italy or Spain. However, a large number of European companies also voluntarily provide explicit information on matters that boards decide, on matters that boards as representatives of shareholder interests consider material enough to require their approval. This material is unique not only due to its hand-collected nature but also as European companies provide more information on boards than their American counterparties.

themselves to determine what kind of voluntary information, if any, adds value to shareholders. This has led to a huge variety in the content and level of detail in board disclosure, which provides a fruitful basis for research.

The empirical part of this paper is based on disclosure of board rules, and specifically retention and delegation of decision-making authority. This is the first study systematically investigating board rules, even though they provide first-hand evidence on corporate governance and role of the board. Basic assumption is that the more board discloses of its influence on corporate decision-making, the more accountable it becomes to shareholders. Classical representation theory differentiates between trustees and delegates as two basic types of representatives, trustees acting on independent judgment while delegates attempt to reflect faithfully the views of their electors. Board disclosure provides us with insight how boards understand their representative role, and what determines the nature of representation in corporate governance.

Key results demonstrate a link between different ownership structures and modes of representation. Boards act as trustees in widely held companies or companies dominated by agent owners, exercising what representation theories call process accountability. On the other hand boards in companies with clearly identifiable shareholders act as delegates, disclosing less of their responsibilities, consistent with face-to-face accountability. In addition, board disclosure is found to have externalities, independent directors signaling their skills to director markets, better disclosure demonstrating their capabilities to potential electors.

This paper is organized as follows: In chapter 2 basic concepts of corporate governance are reviewed against theories of representation, accountability and disclosure. In the third chapter, a model of disclosure and accountability is built and analyzed, in order to understand the role of representation in corporate governance. Chapter 4 concludes with recommendations for future research.

## 2. Literature review

This paper proposes a principal-representative-delegate model of corporate governance, providing a more nuanced image of governance than the classical dualistic principal-agent model (Jensen and Meckling 1976). Instead of seeing shareholders as principals and management as agents, principal-representative-delegate model sees governance as a triangle, where shareholders retain the role of principal, but instead of having a direct link to management, shareholder interests are conveyed to corporate decision-making through their elected representatives, the board, which controls material decisions and further allocates necessary powers to the management for the day-to-day running of the company.

The key actor in representative approach to governance is the board. Its role is two-dimensional, acting as a representative of shareholders and at the same time as a principal to management. Licht (2014) calls it the epicenter of power relations in a corporation. Role of the management can be seen either as an agent or as a delegate of the board, although these two concepts are very close and can be used interchangeably. Due to the intermediary role of the board, agency elements in the relationship between shareholders and management are primarily indirect<sup>1</sup>. This distinction is probably one of the key structural weaknesses of classical agency theory in corporate governance.

Even though last two decades have evidenced an explosion in board-related research, it is still considered under-theorized (Adams, Hermalin and Weisbach 2010, Aguilera and Jackson 2003). Most common approach is to see board as a monitoring and controlling mechanism (Van Den Berghe and Levrau 2004, Kumar and Sivaramakrishnan 2008), complementing direct influence from large shareholders (e.g., Shleifer and Vishny 1986) and threat of takeover through equity markets (Grossman and Hart 1980). However, direct shareholder influence and takeovers take place far less frequently than

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<sup>1</sup> Recent evolution in regulation has strengthened this relationship, though, at least in US, where Dodd-Frank legislation from 2010 provides shareholders “say-on-pay”, rights to express their opinion on the compensation of top management in a company. However, the economic significance of such rules is rather symbolic as average compensation for S&P CEO’s in 2014 was less than 0.1 % of companies’ market cap. See [www.spindices.com](http://www.spindices.com) and [www.mercer.com](http://www.mercer.com) or [www.aflcio.org](http://www.aflcio.org).

regular board work, leaving boards as the primary mechanism of management control and representation of shareholder interests.

Even though the relationship between board and shareholders is not based on incentives and control, two basic elements of agency theory, researchers and practitioners routinely consider boards as shareholders' agents (see e.g. Reeb and Zhao 2013, BlackRock 2014). Typically in Europe board compensation is only weakly tied to corporate performance as it is publicly approved in shareholders' meeting and there is less negotiation compared to management compensation. Board members dissatisfied with the offered compensation will not be proposed to shareholders, and thus the game-theoretic situation is simple: take it or leave it. Instead of extrinsic motivation, directors are driven by intrinsic factors, such as reputation or esteem, being a part of social elite (Pepper and Gore 2012, Adams, Hermalin and Weisbach 2010). After directors have been elected, direct control mechanisms are also few. Audit and legal system provide some control, and largest shareholders may be able to control their representatives through direct access to board members, but fundamentally board success as shareholder representatives is assessed in shareholder meetings where directors are selected and can be dismissed.

In order to understand how shareholder interests are represented in corporate governance, principal-representative-delegate model draws from the literature on representation (Pitkin 1967, Mansbridge 2003, 2011), accountability (Tetlock 1983, Buchman, Tetlock and Reed 1996, Roberts, McNulty and Stiles 2005, Tetlock et al. 2013) and disclosure (Leuz and Verrecchia 2000, Healy and Paleu 2001, Beyer et al. 2010). These approaches are necessary building blocks for a new model of corporate governance, applicable to major public companies in Europe with large shareholder bases, consisting of varying shareholder types and being represented by directors with different understandings of their roles as representatives. This chapter further establishes the basis why board disclosure can be seen as a proxy of accountability and why accountability is the basis of representation, leading to empirical analysis of representation in the following chapter.

It is argued in this essay that by introducing theory of representation into corporate governance literature, together with theories of accountability, we

can build a more refined agency model of governance. Standard agency theory does not separate between the two distinct main relationships, between shareholders and board, and further, between board and management, but rather focuses on the shareholder primacy, and how various actors contribute to the mythical goal of shareholder value maximization. Thus the approach in this essay is clearly connected to but it is more refined than the traditional agency theory by analyzing separately the two relationships, and bringing the theory of representation as a framework for analysis.

## **2.1 Theory of representation**

*Parliament is not a congress of ambassadors from different and hostile interests, which interest each must maintain, as an agent and advocate, against other agents and advocates; but Parliament is a deliberative assembly of one nation, with one interest, that of the whole. You choose a member, indeed; but when you have chosen him he is not a member of Bristol, but he is a member of Parliament.*  
- Edmund Burke (1774)

Two main streams of political (philosophical) representation are attributed to Thomas Burke (1729-1797) and James Madison (1751-1836), who respectively consider representatives as either trustees or delegates. Burke sees that representatives should have independence of judgment after they have been elected, and distance themselves from the narrow interests of their own electors<sup>1</sup>. On the other hand, Madison assumes a much closer relationship between electors and representatives, seeing representatives as delegates, representing as faithfully as possible the preferences of their electorate (Madison 1788). It is easy to see that current corporate governance has elements of both – independent directors using their own judgment while directors dependent on major shareholders inherently or explicitly taking their reference group into consideration. How to combine

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<sup>1</sup> See O’Gorman (2004) as a good summary of Burke’s political thought and ideas on representation

these two distinct roles in a board is a fundamental dilemma of representation in corporate governance.

Political representation and corporate governance share the same value basis. Both are based on transparency and equality (Pollak et al. 2009). Information disclosure enables voters and shareholders to make independent assessment of their representatives. Voters and shareholders have equal rights of vote in electing representatives, although in governance one-share-one-vote principle is not universal<sup>1</sup>. Another similarity arises from goal setting. Political representation is usually seen to target “common good” (“the greatest possible good for the greatest possible number of individuals”)<sup>2</sup>, a concept resembling “maximization of shareholder value”. However, political process presents various alternatives to reach this goal, while director elections in corporate governance are seldom effectively contested (Aguilera 2005).

The standard theory of representation is based on large communities, authorization and accountability, elements also found in widely held large public companies. “The essence of representation is the delegation or granting of authority” (Tussman 1947, quoted in Pitkin 1967); in corporate governance shareholders delegate the vast majority of their powers to elected representatives, the board. Moreover, theory of accountability considers a representative someone who is to be held accountable to another for what he does (Pitkin 1967, p. 35). Representative accountability differs from agency theory in one critical aspect: in agency, accountability is based on contract, while in representation its basis is election. Management accountability is assessed by a defined group of people (board) and can lead to dismissal at any moment, while representative accountability in normal circumstances allows shareholders to change directors only at pre-determined intervals.

Pitkin (1967) classifies four different types of representation, symbolic, formalistic, descriptive and substantive. All four types can be found also in corporate governance. Lorsch and McIver (1989) called directors as pawns – boards being at the mercy of management, unable to influence even

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<sup>1</sup> Universal suffrage is also a quite recent invention, as voting has been restricted by wealth, gender or race for most of the period of human representative democracy.

<sup>2</sup> This quote is normally attributed to Jeremy Bentham (1748-1832), although the idea can be found in antique political philosophy

material decisions and thus providing only a symbol of representation. Boards being a universal phenomenon in corporate governance, symbolic representation can be seen as the minimum level of representation. However, it provides shareholders with few tools to ensure proper representation of their interests. Hard and soft law<sup>1</sup> are the basis for formalistic representation, where accountability is seen through legal liability, representatives acting as delegates of shareholders, controlling that management acts in line with rules and regulations, but formal representation does not ensure that directors would have a major influence on the business. In formalistic representation, shareholders are able to observe that decisions are correctly made, but responsibility for outcomes lies firmly with the management. Descriptive representation is directly related to elections. Shareholders can choose directors that are known to reflect their preferences, although requirements for gender or minority representation can also be considered as descriptive representation. Electing directors which resemble shareholders should provide a reasonable proxy for interest alignment, directors acting in line with their electors' preferences. The last of Pitkin's types is substantive representation, such as a regulatory requirement of having financial expert in board audit committee. In essence, board consisting of directors with a variety of skill sets is based on substantive representation, each providing something other board members or top management may be lacking.

An alternative view to Pitkin's now classical definition is provided by Mansbridge (2003, 2011), who sees modern societies having promissory, anticipatory, gyroscopic and surrogate representation. Promissory representation is similar to formalistic model; a key task of board as representatives is to ensure that company is being managed in line with laws, regulations and corporate documents. This legalistic view highlights the controlling role of board on behalf of its decision role. Anticipatory representation is related to re-elections of representatives, how directors can influence their future electability through disclosure of their role in corporate governance. Shareholder choice is dependent on information available on the quality of their representation and thus directors act as they

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<sup>1</sup> Hard law consists of e.g. corporate and securities market laws, while soft law consists of binding recommendations such as corporate governance codes. See e.g. Enriques, Hansmann and Kraakman (2009) on discussion of hard and soft law in corporate governance

believe shareholders expect them to act. In case directors dynamically adjust their acts in line with the evolution of events<sup>1</sup> Mansbridge talks about gyroscopic representation. This concept is an evolutionary version of Burke's independent judgment, representatives acting on their own beliefs and principles, although gyroscopic representation assumes changing preferences rather than stable principles. In surrogate representation, directors attempt to express interests of large groups of shareholders, not only their own immediate reference group. Surrogates act as if those represented were present, a model resembling Madison's archetype of representation. It needs to be noted that these four types of representation are not exclusive of each other, and applied to corporate governance, boards consists of directors with varied understandings of their representative roles, hiding differences behind a unitary image of representation.

We need to add one more type of representation to cover the important difference between political and corporate representation, the changing nature of caucus, possibility of entering and exiting shareholder base. In line with analysis of electorate (Pollak et al. 2009), three different types of owners can be identified, traders who come and go between board elections, passive owners who sit and hold but do not vote, and active owners who wish to influence the real decisions in a company and participate in election process of representatives. These three have very different implications for representation and accountability. Traders and other buying and selling shareholders as principals do not really correspond either to Pitkin's or Mansbridge's categorization, but rather to marketplace representation (Arnold 1993), exerting power on companies and their governing bodies through their impact on share prices. For passive shareholders representation is primarily symbolic, as they do not wish to influence the way their representatives act. On the other hand, active shareholders can further be split into ones with formal and real power (Aghion and Tirole

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<sup>1</sup>Quoting Mansbridge (2011): "In this model of representation, voters select representatives who can be expected to act in ways the voter approves *without* external incentives. The representatives act like gyroscopes, rotating on their own axes, maintaining a certain direction, pursuing certain built-in (although not fully immutable) goals. As in the other new models of representation introduced here, these representatives are not accountable to their electors in the traditional sense. In this case, the representatives act only for "internal" reasons. Their accountability is only to their own beliefs and principles."



1997). I contend that a fundamental shareholder right is to participate and vote in general meetings, but for most owners, this is a formal right with little real power, corresponding to symbolic representation. Large shareholders have real power, having the ability to influence the selection of candidates as well as election thereof. It is very unusual that shareholders' meetings are given a choice between several board candidates, so real power of representative selection takes place outside the actual meeting (Aguilera 2005). The process of electing shareholder representatives has received little academic attention, and it is not well understood<sup>1</sup>. What actually happens in back-room negotiations is another black box of corporate governance.

Representation is not a unidirectional relationship from shareholder to directors, it also requires a feedback loop of accountability. Roberts, McNulty and Stiles (2005) argue that agency-theoretic arguments' dominance on governance debate does not sufficiently consider the practical challenges boards encounter in creating and sustaining accountability, calling for more understanding on governance relationship between boards and investors, focusing on accountability. Roberts, McNulty and Stiles (2005) further differentiate between remote and face-to-face accountability, effectively describing two prime appearances of representation. Board has remote accountability towards distant shareholders, without direct access to board members. Public disclosure is a means for remote accountability, giving the impetus to shareholders for determining how to vote with their shares. On the other hand, boards have face-to-face accountability towards major shareholders, who have access to board members, and which are consulted on the choice of candidates for election in shareholders' meeting.

Accountability as a concept is well analyzed in behavioral decision-making theories. Tetlock et al. (2013) separate ex ante process accountability from ex post outcome accountability. In corporate governance, disclosure of rules

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<sup>1</sup> In political science, empirical research has shown that most voters do not have clear preferences nor deep knowledge, highlighting the information gap between principals and representatives in governance. Electoral decisions are based on identity, common interests or expertise (Pollak et al. 2009). Although shareholder meetings practically never lead to changes in proposed directors (Bebchuck 2005, Cai Garner Walkling 2009), election results as such can impact governance and even corporate outcomes. Ertimur, Ferri and Oesch (2015) find that shareholder votes influence governance, even if they are defeated. Fischer et al. (2009) find a relationship between low board approval in shareholder elections and CEO and board turnover, improved acquisition and divestiture performance.

and responsibilities is a means to communicate process accountability, while financial results are the basis of outcome accountability. As Tetlock et al. note, neither of the two types is pure, and in practice accountability consists of both process and outcome elements. Buchman, Tetlock and Reed (1996) define different strategies of accountability<sup>1</sup>, two of which are closely related to theory of representation. Alike Madisson's representation, Buchman Tetlock and Reed define acceptability heuristics as a process where representatives choose a path of least resistance, mimicking the views of "important others". Important others can be understood as large clearly identifiable shareholders in corporate governance. On the other hand, resembling Burke's independent judgment, "vigilant information processing" representatives do not know the views of those being represented, and thus act on independent judgment, leading to a more careful process of decision-making. More generally, Tetlock (1983) argues that already awareness of being accountable impacts decision-making, accountability being a powerful motivating factor. It improves the quality of thought processes, contributing to better decision-making (Tetlock et al. 2013), although it does not guarantee that the decisions themselves would be better. Even though accountability researchers have not explicitly investigated boards, it is evident that representation without accountability in corporate governance is virtually impossible.

Although primary focus of this paper is on representation, relationship between board and shareholders, it is useful to discuss briefly the relationship of delegation and accountability. Literature starting from Holmström (1984) analyzes delegation in a simple owner-manager agency setting. Aghion and Tirole (1997) contribute to it by arguing that information gap is essential in defining optimal delegation, while Harris and Raviv (2010) question if enhanced control of decision rights actually leads shareholders better off. However, principal-representative-delegate model is more complex, as there are two levels of delegation, an extensive general delegation from shareholders to board and a more detailed delegation of decision rights from board to management. The extent of delegation is dependent on level of materiality, shareholder powers being quite formal, being documented in Articles of Association, while directors can quite freely choose their level of involvement through definition of matters that are

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<sup>1</sup> Buchman, Tetlock and Reed call their approach "Social contingency model"

reserved to board. Board has both process accountability for optimal delegation of decision rights and outcome accountability for their economic results, disregarding if decisions were made in the board or not. Assessing determination of delegation rights is outside the scope of this paper, although the question itself is important<sup>1</sup>. For example, Graham, Harvey and Puri (2014) study decision-making authority within a firm, focusing on CEO's delegation of decision rights to lower levels of organization and find that delegation is more likely if a firm is complex, that reputation of divisional managers impacts the amount of delegation and that decisions external to the firm (mergers and acquisitions) are less likely to be delegated<sup>2</sup>. Similar questions should be asked on what and why board delegates to management.

Representation is a general way of organizing expression of interest for any large community. Large, widely held companies have numerous shareholders, and the number of interested parties is even larger, as agent owners<sup>3</sup> themselves represent a wide variety of beneficiaries, such as current and future pensioners and citizens of nation states. Dualistic agency model is based on a simplified model of representation, where no independent body with delegated powers exists. Principal-representative-delegate model asks the questions of representation, accountability and delegation in addition to motivation and control. Representation theory provides us with well-established concepts adaptable to corporate governance, such as symbolic, formal, substantive and descriptive representation, or marketplace representation, process and outcome accountability and remote and face-to-face accountability. Accountability provides a feedback loop necessary for effective representation, and disclosure, to which we turn next, is the primary way of communicating it.

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<sup>1</sup> This question is discussed in detail in the third essay of this dissertation, "Power and decision control"

<sup>2</sup> M&A decisions, based on the empirical data of this study are normally board decisions

<sup>3</sup> This distinction is important, as agent owners, such as state or institutional investors may have a large ownership share, but being themselves representatives of their ultimate beneficiaries, their disclosure needs arise from their own accountability

## 2.2 Disclosure

Gibbins et al. (1990) defined disclosure as “any deliberate release of financial information, whether numerical or qualitative, required or voluntary, or via formal or informal channels”, urging for researchers to analyze the extent and determinants of voluntary disclosure. Beginning with general theory of disclosure, this chapter reviews the rationale, process, costs and relevance of disclosure, including behavioral aspects and motivation thereof, in order to establish the link between disclosure, accountability and representation. The main empirical hypotheses driven from this analysis are that the amount of disclosure is positively related to remote accountability and negatively to face-to-face accountability, remote accountability expressing symbolic and formalistic representation, while face-to-face accountability is closer to descriptive and substantive representation. These hypotheses also test if and when representatives act as trustee and if and when as delegates.

A large literature investigates corporate disclosure. Excellent summaries are provided by Healy & Palepu (2001), Leuz and Wyzocki (2008) and Beyer et al. (2010). However, there seems to be no research specifically focusing on board disclosure, even though there is plenty of relevant material available. Board disclosure can be defined as public information on the characteristics, policies and acts of boards of directors, usually either in form of special sections in annual reports, as stand-alone governance disclosures, as additional information on websites or in US circumstances, in proxy statements. Neither recent reviews on board literature (e.g. Adams, Hermalin and Weisbach 2010), nor reviews on disclosure literature (e.g. Beyer et al. 2010) include any references to studies that would specifically focus on this issue. The reasons may be manyfold. Board disclosure may be considered irrelevant to shareholders, having limited impact on company value, disclosure may be seen only as a necessary evil, or researchers may simply not have had access to suitable information.<sup>1</sup> However, authorities

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<sup>1</sup> It is interesting to compare disclosure of private entities to public institutions.

Accountability requires wide discovery rights for citizens, and even boards of central banks have begun to publish their detailed meeting minutes, providing more information to the markets to reduce uncertainty regarding their action. Societal benefits of disclosure are considered superior to its consequential costs.

seem to consider extensive board-related disclosure relevant, as it is a common requirement in European regulation<sup>1</sup>.

Several studies investigate the relationship between corporate governance and corporate disclosure. Generally, these studies find a positive link between indicators of good governance and disclosure (Ernstberger and Gruning 2013). In these studies, disclosure is defined as an index of published information (e.g. Eng and Mak 2003, Chen and Jaggi 2000) or as a specific act, such as management compensation (e.g. Laskmana 2008) or quality of financial forecasts (e.g. Ajinkya et al. 2005 and Karamou and Vafeas 2005). Recently, there have even been attempts to use computerized textual analysis in order to overcome the oversimplification inherent in calculated indexes of disclosure (Ernstberger and Gruning 2013). Reduction of information asymmetries is seen as the primary motivation of disclosure (Leuz and Verrecchia 2000) as it should lead to lower cost of capital, typically proxied by buy/sell spreads and liquidity of shares in the market.

There are two types of disclosure: mandatory and voluntary. Standard theory of disclosure argues that mandatory disclosure is motivated by economies of scale, agency costs and real and financial externalities, while voluntary disclosure is motivated by adverse selection, information asymmetry and risk premium (Beyer et al. 2010, Holmström 1979). Elements of standard theory can also be found in board disclosure. It can be value-relevant as it signals investors that their representatives are “in charge”, reducing the risk of management not respecting shareholder interests. Without disclosure of information on latent powers of the board, investors may not be able to determine the depth and width<sup>2</sup> of their representation, which could lead to adverse selection because of risk avoidance bias. Similarly, in agency terms, Lombardo and Pagano (2002) argue that better disclosure reduces monitoring costs as investors need less

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<sup>1</sup> A typical example is item 35 of Austrian Corporate Governance code (2012): “The supervisory board shall adopt internal rules of procedure for its work, which shall contain stipulations regarding the disclosure and reporting obligations of the management board, including subsidiaries, unless these obligations are defined in articles of incorporation or the internal rules of procedure of the management board. Furthermore, the internal rules of procedure shall define the establishment of committees and their scope of competence. The sections of the internal rules of procedure concerning these areas are to be disclosed on the website of the company. The number and type of committees set up and their decision-making scope of competence are to be disclosed in the Corporate Governance Report”.

<sup>2</sup> Depth defined as the threshold of decision limits and width as the range of matters specified to be under board decision control.

effort to verify basis of their assessment of investment choices. Board rules, in fact, establish a second level of corporate disclosure that is more extensive than the information provided to shareholders and thus creates economies of scale in monitoring on behalf of shareholders. However, even if several elements of standard theory can be found in board disclosure, principal-representative-delegate model argues that standard model is incomplete, as it primarily focuses on the relationship between management and shareholders, bypassing the elements of representation and accountability, the relationship between board and shareholders.

Disclosure and accountability have a temporal dimension important for representation. In line with Tetlock et al's (2013) concepts of process and outcome accountability, Leuz and Verrecchia (2000) differentiate between ex ante and ex post disclosure, and argue that ex ante commitment increases investor trust, disregarding if information is pleasant or not. Disclosure of board rules is ex ante information and creates process accountability, being a commitment from the board to act on matters it considers material. Roberts (2009) argues that transparency is "a mechanism of accountability", specifically for "distant others", a concept related to remote accountability. Transparency reduces the danger of collusion behind the doors, large shareholders using face-to-face accountability to influence corporate decision-making without consideration for the interests of distant shareholders. Ex ante process disclosure may thus provide protection from informal power relationships, invisible in formal representation.

Board disclosure is an endogenous process, and its motivation may also arise from matters internal to the board. Pepper & Gore, (2012) stress the behavioral aspects of governance, and argue that intrinsic motivation can be more influential as board motivator than extrinsic financial motivation. Through disclosure, boards may signal to shareholders that a properly organized decision control process evidences a good representation of their interests, and thus increases reputational capital of directors. Additionally, part of the motivation for board disclosure may be due to anticipatory representation, signaling capabilities of board members, improving their chances of being re-elected or being elected to other boards (Reeb and Zhao 2013). Thus board disclosure may have externalities, similarly to what Beyer et al. (2010) call real externalities, disclosure impacts decisions by third parties, electors of boards in other companies.

In addition to benefits, disclosure also has costs. Verrecchia (1983) splits such costs into direct and consequential expenses, first being the costs of preparation and distribution of information and the second consists of potential costs of disclosing sensitive propriety information. Public disclosure may lead to harmful outcomes for a company due to product market competition, and disclosure of board rules may include essential strategic information useful also for competitors. Consequential losses from weak disclosure appear not only in market-based outcomes, but also in real decisions. In line with basic investment theory, higher cost of capital as an outcome of weak disclosure reduces the number of “good” investment projects available to a company and thus has real effects not only for the company but to the economy as a whole (Admati & Pfleiderer, 2000). Similarly, disclosure of board limits of delegated authority may impact real future cash flows. Disclosure creates accountability and a requirement for the board to act. In case the range of issues subject to board control is too wide, or if the level of materiality is set too high, both may lead to non-optimal decision-making, creating losses to shareholders (see Harris and Raviv 2010).

Disclosure is an essential element of representation. Principal-representative-delegate model of governance argues that representation creates a need for accountability, and accountability would be impossible without disclosure. Ex ante disclosure of board rules creates process accountability and ex post financial reporting outcome accountability. Public disclosure is a means of remote accountability, only the very largest shareholders benefiting from face-to-face accountability. The following empirical analysis investigates the link between disclosure, accountability and various forms of representation

### **3. Analysis and results**

In order to analyze the relationship between board and shareholders through the principal-representative-delegate framework, an empirical model is built where disclosure of accountability is used as a proxy of representation. The dependent variable (A\_INDEX) is a proxy for board

accountability towards shareholders, built from board disclosure by calculating the number of specific decisions that require board approval. Logic of the model is the following: representation is based on election, and shareholders must assess board candidates in order to provide their votes. There are two types of board candidates, ones who wish to continue in their current role, and on whom shareholders have past experience, and others who are new, and on whom shareholders have no experience within their company<sup>1</sup>. Assessment can be based either on process accountability, where directors have shown past ability to create an organized structure capable of decision-making, or on outcome accountability, where company performance can be seen as a proof of not only management but also director quality. In order to gain information on director capabilities, primary method of assessment is through disclosure, as very few shareholders have direct links to board members. Financial disclosure provides information on outcome accountability, but it is difficult to separate the influence of organizational decision management from board decision control. However, disclosure of board's role in decision control is directly related to board's own process accountability. The extent of disclosure provides evidence on how widely boards understand their representative role; the basic assumption is that the more remote the shareholders are, the more accountability is based on board disclosure while dominant shareholders have the possibility to observe director performance through personal contacts and they need less disclosure. It is also assumed that owners which themselves represent a large number of ultimate beneficiaries require disclosure as a proof of their own accountability. Such agent owners include not only institutional investors but e.g. states representing the interests of citizens. This leads to the first hypothesis:

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<sup>1</sup> If we see directorship as a specific skill, both shareholders and board recruitment consultants can assess director quality through board disclosure. Dominant shareholders may use their personal knowledge of director performance for selecting directors for other companies, although in the sample material of 600 largest European companies by market capitalization, interlocking dominant shareholders do not exist. Interestingly, though, in 76 of the widely held companies in the sample, BlackRock is the largest single shareholder, holding usually less than 10 % of the voting stock. The influence of such large agent owners on board selection would be worth a separate study.



H1: In the case largest shareholders are agent owners, board disclosure is more extensive than in cases where dominant shareholders can be clearly identified.

In the first case, representation is based on what Roberts, McNulty and Stiles (2005) call remote accountability, while in the second case, directors have face-to-face accountability. This distinction is related to horizontal agency problem (Shliefer and Vishny 1997, Roe 2004), which sees the relationship between dominant and minority shareholders as the second main agency problem in governance, dominant shareholders driving corporate decision-making to their own benefit. However, the situation is more complex, as a board has several members with potentially different views and interests, and ownership dominance must pass through board decision control in order to influence actual corporate decision-making. In line with classical agency theory, Schliefer and Vishny (1997) assume a direct link between owners and management, but their analysis does not consider the structure through which the dilemma arises, and more specifically, how board with broad powers and an independent role influences the problem through its understanding of representation. Thus representation provides us with additional understanding of the horizontal agency problem, and it may also provide us with insights how to further improve corporate governance.

Assessing the first hypothesis against past literature, previous results need to be treated with caution, as it seems that there is no research specifically investigating board disclosure. Disclosure is usually seen as a managerial exercise, in line with agency theory, although board retains the ultimate responsibility for all corporate disclosure. There are conflicting results regarding the relationship between ownership and disclosure. Eng and Mak (2003) argue that the more diffuse the ownership the more monitoring is needed, implying a negative relationship between ownership concentration and disclosure. Similarly, Ajinkya et al. (2005) find that concentrated institutional ownership leads to reduced disclosure, as large owners are able to extract information from companies directly from its directors and management. On the other hand, Karamanou and Vafeas (2005) find that institutional ownership improves forward guidance, which may be a specific part of disclosure related to professionalism of such investors. The relationship may also be inverse, as Healy, Hutton and Palepu (1999) observe that companies with good disclosure attract institutional investors.

Similarly, Healy Hutton and Palepu (1999) and Bushee and Noe (2000) report that increases in disclosures are associated with an increase in institutional investors ownership, possibly because of the pressure they exert on managers. While plenty of literature focuses on institutional ownership and disclosure, past research leaves vague if ownership type and ownership concentration are conceptually two different phenomena. Eng and Mak (2003) find a positive relationship between government ownership and disclosure, which may be due to the inherently transparent nature of public bodies. Fan and Wong (2002) report on East Asian data that controlling owners are perceived to report accounting information for self-interested purposes, causing the reported earnings to lose credibility to outside investors. Additionally they find that concentrated ownership is associated with low earnings informativeness as ownership concentration prevents leakage of proprietary information about firms' rent-seeking activities.

Based on agency theory, we should find a negative relationship between ownership concentration and disclosure, as ownership should provide dominant shareholders with a higher voice through their representatives in the board, and as economic outcomes increasingly belong to them, they need less open accountability. However, we could also assume a reverse relationship based on regulation. It is a common requirement in European corporate governance that a majority of directors should be independent of both large shareholders as well as of management, even if majority of votes is controlled by a single shareholder. Thus board disclosure might also provide signal information of proper governance structures, board decision control mitigating potential horizontal agency problems. If control of management decisions is firmly in the hands of a collegium of directors, it reduces the potential misbehavior by large shareholders. As these assumptions lead to different conclusions, no assumption is made of the direction of relationship between ownership concentration and board disclosure

H2: Ownership concentration has no association with disclosure of accountability

A second subject related to representation, and discussed in the disclosure and governance literature, is the relevance of board characteristics as a

determinant of corporate disclosure. Boards can make only one disclosure decision, and it is evident that the structure of a board has influence on such decision. Analyzing general voluntary disclosure, Wang and Hussainey (2013) find that corporate disclosure is driven by directors' ownership, board size, board composition and duality of Chief Executive Officer's and Chairman of the Board's role, concluding that better governance improves disclosure quality. Independence is considered to be the most important board characteristic impacting its behavior. Ajinkya et al. (2005) and Karamanou and Vafeas (2005) find a positive relationship between quality of earnings forecasts and board independence. Seamer (2014) finds evidence that disclosure failure is less likely if the proportion of independent directors is higher. In a meta-analysis of 27 relevant empirical studies, Garcia-Meca and Sanchez-Ballesta (2010) report that board independence is positively related to voluntary disclosure. Eng and Mak (2003) come into contrasting conclusion concluding that independence reduces voluntary disclosure, which may be due to country-specific factors on their data on Singapore companies. Armstrong, Core and Guay (2014) investigate the direction of causality, and they report that increase in share of independent directors results in generally better corporate transparency. Lim, Matolcsy and Chow (2007) separate different types of voluntary information in their analysis. They find that disclosure of historical financial information is not related to board characteristics, but boards dominated by independent directors voluntarily disclose more forward-looking quantitative and strategic information, which would support the assumption that independence is associated with better disclosure of board rules. However, motivation for disclosure may also arise from intrinsic motivation and director market considerations. Lim, Matolcsy and Chow (2007) further argue that voluntary disclosure signals to the director market that members of the board are fulfilling their duties. Bushman et al. (2004) find that ownership concentration and outside directors' reputations vary inversely with disclosure quality. Stein (1989) observes high ability directors are more willing to have open disclosure than lower ability directors. Thus board disclosure may not only be connected to representation, but it may be a way for independent directors to communicate their abilities to director market, improving their ability to be re-elected or elected to other boards. In contrast, non-independent directors have no similar need for extended disclosure, as their election is dependent on large shareholders. Thus we

should be able to observe a positive relationship between proportion of independent directors and board disclosure:

H3: Proportion of independent directors is positively associated with board disclosure

Board disclosure may also be related to other board-specific factors, which also will be included in the empirical model. Literature generally assumes that CEO/COB duality reduces board independence (Fama and Jensen 1983, Wang and Hussainey 2013) and thus may negatively impact voluntary disclosure. Seamer (2014) finds empirical support to this argument, concluding that that separation of CEO and COB roles improves disclosure quality. Another similar variable is board size, which often is connected with monitoring, although with conflicting assumptions. For example, Jensen (1993) argues that smaller boards are more effective in controlling the management, while Coles, Daniel and Naveen (2008) consider that board size increases its knowledge base and balances its workload. Following Laksmana (2008), this study assumes non-directional relationship between board size and board disclosure. On the other hand, Laksmana (2008) finds that less time spent on board meetings leads to lower transparency, and increased accountability should result in a more frequent communication between the board and management. Duality of leadership and board activity, proxied by the number of meetings held, are thus included in the model as additional board-related independent variables.

We cannot exclude an assumption that board disclosure is linked to firm-specific factors. Several studies (e.g. Lim, Matolcsy and Chow 2007, Eng and Mak 2003, Laksmana 2008, Ajinkya et al. 2005 and Karamanou and Vafeas 2005) find that firm size is positively related to quality of disclosure, which seems natural, as larger firms are more complex and they have better resources to report, although this may also be explained by representation, as larger firms normally have more shareholders and the need to communicate effectively is higher. A common proxy for firm size is log of assets (see e.g. Lim, Matolcsy and Chow 2007) which is somewhat problematic due to differences in industries, specifically regarding companies from financial sectors.

Two institutional variables are included in the model as control variables. Although all companies in the sample originate from European Economic

Area <sup>1</sup> and have a very similar regulatory environment, there may also be country-specific cultural differences. This approach is strongly supported by the research on legal origin (LaPorta et al. 2008). However, instead of using histories of legal systems as a proxy, considering compulsory EU rules such as Transparency directive 2004/109/EC, (revised in 2013/50/EU), this paper assumes that institutional environment for disclosure is harmonized and if there are country differences in disclosure, they can better be explained by cultural factors rather than country dummies. Thus Hofstede indicator of power distance is used as a simplified proxy for country effects as out of his six indicators it is most closely related to how decision control is divided between corporate bodies<sup>2</sup>. It gives highest scores to Latin countries (such as France, Spain and Italy), which also provide most information on board rules (table 1). In addition, dummy factors for industry are tested, as the industry in which company operates may also influence disclosure (see Cai et al. 2014) reflecting “follow thy neighbor” practice (Elzahar and Hussainey 2012).

Thus, the following model is estimated:

$$A\_INDEX = \beta + x_1 OWNERSHIP + x_2 BOARD CHARACTERISTICS + x_3 BOARD ACTIVITY + x_4 SIZE + x_5 CULTURE + x_6 INDUSTRY + \mu$$

where dependent variable (A\_INDEX) is calculated as a total number of specific decisions that require board approval<sup>3</sup>. Specificity is defined as a numeric limit that enforces submission of decision to board decision control, such as “all investments larger than 100 MEUR must be decided by the board”. Specific limits are seen as a reasonable proxy of accountability, while “all material investments are subject to board approval” –type of rules leave accountability vague. This does not mean that no-disclosure boards would not have any decision limits, but without disclosure there is no evidence of process accountability available to shareholders. In addition, as

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<sup>1</sup> Only Switzerland and Norway are not direct members of European Union, but EEA agreement provides them the same rights and responsibilities for free movement of goods, people and capital as any EU member state has. The agreement also requires EEA members to implement EU directives regulating financial markets

<sup>2</sup> Other five Hofstede indicators are individualism, uncertainty avoidance, masculinity, indulgence and long term orientation. See <http://geert.hofstede.com/national-culture.html>

<sup>3</sup> Index calculation includes one extra point for disclosure of board rules, disregarding if they consist limits of authority or not.

most of other key items in board rules are virtually identical (selection of top management, strategy, regulatory control), voluntary information on powers retained by boards provides distinct information on board accountability. Eng and Mak (2003) calculate the number of disclosed items as a proxy of quality of disclosure although such an index is somewhat problematic, as it does not differentiate between more and less important matters. However, giving equal weighting to all limits of decision control can be supported by assuming that boards define materiality consistently, each limit being equally relevant for representation of shareholder interests.

Board rules show various characteristics. 385 companies in the sample of 600 largest European companies by market capitalization either disclose their board rules (325 companies) or provide at least one numeric limit of board authority (297 companies), matters that management is required to submit to board decision control, implying a direct accountability of directors for such decisions. 60 companies disclose decision limits as a part of their other disclosures, without providing complete board rules. There are four generic types of decision limits, acquisitions and investment, business transactions, financial agreements and technical limits, such as tax or legal settlements, investment limits being most common. Each category may have more than one type of decision limit, and the analysis separates e.g. investments from acquisitions or divestments. Maximum value for A\_INDEX in the sample is 14, and mean, including firms with no numerical limits is 2,41 Table 1 presents A\_INDEX by country and by industry.

The research sample consists of unique, hand-collected information on 600 largest European companies by market capitalization, as of 25. August 2012<sup>1</sup>. It includes companies from 17 countries and 19 industries, providing a reasonable image of European corporate sector. As Ernsberger and Gruning (2013) note, European companies share the same minimum level of disclosure, due to European Union Transparency Directive and EU's IAS regulation, largely harmonizing potential national differences in institutional setting. The material was collected from annual reports, separate governance reports or separately disclosed board rules, or in some cases from articles of association. Collected material consists of information

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<sup>1</sup> EuroSTOXX 600 as of 25.8.2012

Table 1

A\_INDEX by country and by industry

EuroSTOXX 600 stock index divides companies into 19 different industries. All of the companies are listed in countries belong to European Economic Area, which all are required to follow EU Transparency Directive (2004/109/EC, revised in 2013/109/EC). Countries are AT = Austria, BE = Belgium, CH = Switzerland, DE = Germany, DK = Denmark, ES = Spain, FI = Finland, FR = France, GB = Great Britain, GR = Greece, IE = Ireland, IT = Italy, LU = Luxembourg, NL = Netherlands, NO = Norway, PT = Portugal, SE = Sweden

Industry	Country																
	AT	BE	CH	DE	DK	ES	FI	FR	GB	GR	IE	IT	LU	NL	NO	PT	SE
Automobiles & parts				0,8			0,0	3,75	2,0			4,5					
Banks	0,5	0,0	1,4	4,0	0,0	1,7	0,0	4,3	2,8	1,0	3,0	2,8			1,0	1,0	0,3
Basic resources	0,0					1,0	0,5	5,0	2,7			0,0		0,0	5,0		0,33
Chemicals		3,0	3,0	2,6			0,0	6,0	2,5					8,5	4,0		
Construction			6,0	0,0	0,0	0,7	0,0	2,8	0,0		3,0			1,0			1,7
Financial services		1,0	0,0	0,0		1,0		7,5	2,7			3,0					0,0
Food & beverages		7,0	0,8	8,0	0,0	1,0		7,3	3,8	1,0	0,0	7,0		5,6	0,0		
Healthcare		5,0	3,7	0,3	0,7	1,0	0,0	3,7	1,5		1,0			1,0			0,3
Industrial goods and	0,0		4,1	2,2	0,0	1,7	1,2	4,5	1,7		1,0	5,8		4,8	1,0		0,1
Insurance	0,0	4,0	2,8	0,3	0,0	4,0	0,0	3,3	1,8			10,0		4,3	0,5		
Media		1,0		0,0				2,6	3,1			3,0	5,0	1,5	0,0		2,0
Oil & gas	0,0					2,5	0,0	2,0	0,8			8,5		3,5	0,8	5,0	0,0
Personal & household			1,5	3,6			1,0	1,8	1,5			9,5					0,2
Real estate	0,0	2,0	2,5	2,3				4,6	1,9					3,7			1,3
Retail		0,5	1,5	0,0		1,0	0,0	7,7	2,8					10,0		3,0	0,0
Technology			3,0	0,8			1,0	4,9	1,7			3,0		1,0			0,0
Telecommunications	0,0	4,0	7,0	0,0	0,0	1,0	0,0	3,0	2,0			7,0		3,0	0,0	1,0	0,0
Travel and leisure				0,0				5,7	3,3	1,0	0,0						
Utilities	0,0			4,5		3,2	1,0	7,3	2,3			6,8				1,0	
TOT	0,1	2,4	2,9	1,6	0,3	1,8	0,6	4,3	2,2	1,0	1,0	5,1	5,0	4,2	1,1	2,2	0,4
N	9	14	50	67	16	28	19	82	180	3	8	30	1	32	15	5	41

on decision limits requiring board authorization, data on ownership concentration, largest shareholders, information on board members and level of board activities. In addition to ownership and governance data, financial information for the year closing between 30.12.2011 and 30.12.2012 was collected from Orbis database. Two research assistants participated in the classification process, and their coding was independently verified. Statistical analysis was carried out using SPSS statistical program.

Companies from financial sectors (banks, financial services, insurance) are included in the analysis, even though they customarily are excluded due to differences in financial reporting structures. Tests were run for the full sample (N=600) as well as restricted sample excluding banks, insurance and other financial companies (N=489). Table 2 summarizes the definition and measurement of variables

Table 2 Definition and measurement of variables

Variable	Measurement	Definition
A_INDEX	Board accountability index	Disclosure dummy + Total number of disclosed limits having an economic value
DOMINANCE	Dominance of largest shareholder	Percentage of votes held by the largest shareholder
CEO_COB	CEO influence	All cases where Chairman of the Board is either current or past CEO
MEETINGS	Board meeting frequency	Number of board meetings in the last financial year
LN_BS_EUR	Company size	Natural logarithm of balance sheet total
PCT_INDEPENDENT	Board independence	Number of board members classified independent from the company and from the main shareholders as a proportion of total number of directors
STATE	Companies where state is dominant owner	Company where state is largest shareholder, owning more than 10 % of voting stock
FAMILY	Companies where a family of an individual is dominant owner	Company where a family is largest shareholder, owning more than 10 % of voting stock
OTHER	Companies where other type of clearly identifiable non-institutions actor is dominant owner	Such owner with more than 10 % of voting
WIDELY_HELD	Companies without a single dominant owner	Any owner not belonging to categories State, Family or Other
CULTURE	Influence of cultural factors	Hofstede score for power distance
INDUSTRY	Dummy factor for industry effects	19 different industries in EuroSTOXX 600



Ordinary least square (OLS) regression was employed to examine the relationship between index of accountability and the explanatory variables. In addition, due to the large number of zero observation, analysis was repeated using Tobit regression, however, as the results were not materially different, only OLS results are presented. In order to understand representation, independent variables related to ownership are most important. The ownership variables are voting share of largest shareholder (DOMINANCE) and ownership type of dominant shareholder, owning more than 10 % of voting stock, and which can be either FAMILY, STATE, OTHER or WIDELY\_HELD, where OTHER covers several types of owners with a single decision-making body, such as corporates, foundations, banks, private equity or investment companies. Even though there seems to be no theoretical or empirical basis for the 10 % threshold, it is regularly used in literature as a threshold of defining a dominant shareholder, so for the sake of consistency it is also applied in this paper (See e.g. Dahya, Dimitrov, McConnell 2008, LaPorta et al. 2002) WIDELY\_HELD is a residual category, including all ownership structures where there are no dominant owners holding more than 10 % of votes<sup>1</sup>. Corporate governance variables are the proportion of independent directors in board (INDEPENDENCE), independence being categorized as independent of both the company as well as largest shareholders, duality of Chief Executive Officer's and Chairman of the Board's roles (CEO\_COB), considering also cases where COB is ex CEO of the company, and number of meetings of the board during the latest financial year (MEETINGS). Control variables include size of the company, defined as the natural logarithm of balance sheet total converted into Euros at the European Central Bank Foreign Exchange rate as of annual closing date (LOG\_BS\_EUR), cultural factors (CULTURE) expressed through a Hofstede proxy, power distance, which is connected to authority and reflects the national differences thereof, and influence of industry-specific factors (INDUSTRY), tested through 19 dummy factors representing the EuroSTOXX categorization of sample companies.

Table 3 provides statistics on A\_INDEX by type of owner. Companies with state as the

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<sup>1</sup> In few cases where the largest owner is an agent owner (institutional investor) and the voting share somewhat exceeds the 10 % threshold, it is still considered widely held.

Table 3 A\_INDEX by ownership type

Ownership type reflects the largest identified shareholder for sample companies. Category Other consist of several other ownership types, such as other corporations (56 cases), Investment firms (44), Foundations (19), Banks (8) Private Equity (7), Co-operatives (3), Employees (2) and Association (1)

A_INDEX	Largest shareholder				
	Family	Other dominant	State	Widely held	Total
0	57	54	10	94	215
1	22	37	7	60	126
2	9	5	1	24	39
3	8	9	2	19	38
4	5	9	10	23	47
5	9	4	6	17	36
6	7	6	3	12	28
7	4	10	3	13	30
8	4	3	2	7	16
9	2	4	1	3	10
10	2	2	1	4	9
11				2	2
12		2			2
13				1	1
14	1				1
Average	2,18	2,34	3,46	2,38	2,41
N	130	145	46	279	600

dominant owner have a clearly highest accountability index value (3,46), second highest being with widely held companies (2,38) and the lowers with families as dominant owners (2,18).

Table 4 presents the correlation between variables. Accountability index (A\_INDEX) is positively correlated with control variable of power distance ( $\rho = 0,315$ ). There is a negative relationship between concentration of voting rights and independence ( $-0,353$ ), which seems evident, dominant owners electing less independent directors. Interestingly, CEO/COB duality is strongly correlated with CULTURE (power distance) (0,436), combination of power in single hands reflecting hierarchical corporate decision-making structures. Correspondingly, there is a negative relationship between independent directors and power distance ( $-0,211$ ).

Table 4 Correlations between variables

This table reports the correlations between model variables. Variables are defined in Table 2. Significance at the 5% level is denominated by \*, and 1% by \*\*.

	Dominance	Family	State	Widely held	Other	Independent	CEO COB	Meetings	Ln of BS	Culture
A Index	0,027	-0,043	0,106**	-0,010	-0,013	0,047	0,074*	0,056	0,022	0,315**
Dominance		0,450**	0,160**	-0,716**	0,301**	-0,353**	0,090*	-0,077*	0,115**	0,101**
Family			-0,152**	-0,490**	-0,297**	-0,173**	0,111**	-0,205**	-0,074*	0,113**
State				-0,269**	-0,163**	-0,067*	0,055	0,148**	0,196**	0,120**
Widely held					-0,526**	0,340**	-0,146**	0,032	-0,164**	-0,174**
Other						-0,187**	0,029	0,069*	0,141**	0,019
Independent							-0,123**	0,080*	-0,030	-0,211**
CEO COB								0,002	0,058	0,436**
Meetings									0,258**	0,053
LN of BS										0,085*

Table 5 reports the regression results. Models 1a and 2a include the full sample of 600 firms, while models 1b and 2b exclude firms from financial sectors. Accountability index is regressed on ownership, board and control variables. The results show that board accountability is related to type of dominant owner. Family-dominated companies are negatively related to A\_INDEX on 5 % level (model 1a and 1 b t-values -2.486 and -2.182), similarly to the Other category including all other types of dominant shareholders, although this variable reaches level of significance only on test 1b (t = -1.759). On the other hand, in Models 2a and 2b, replacing family and other dominant owners as ownership types by agent owners (state and widely held), the relationships reverses. Variable State is positively related to accountability and significant on 10 % level with both samples (t-values of 1.933 and 1.746). Category Widely held is significant only with the sample excluding financial sector (t= 1.769). Thus these results provide support to Hypothesis 1, which assumed that accountability is related to type of dominant owner. In case state or institutional investors are largest owners, board accountability is connected with higher level of disclosure, indicating a relationship of remote accountability. Correspondingly, the negative relationship between clearly identifiable dominant shareholders and

accountability index indicates a relationship of face-to-face accountability that leads to less transparency to the rest of the shareholder base.

Ownership dominance, measured as the percentage of voting stock held by the largest shareholder is positively related to accountability index in models 1a, 1b and 2b, with t-values significant on 5 % level ( $t = 2,255$ ,  $2,238$  and  $1,833$  respectively).

The relationship between ownership concentration and accountability index is positive and significant on three out of four models ( $t = 2,255$ ,  $t = 2,238$ ,  $t = 1,619$  and  $t = 1,833$ ), which is against assumption derived from agency theory, and can be explained by the need of directors to prove remote representation and reduce risk of misrepresentation due to influence of dominant shareholders. In additional tests negative but inconclusive results were reached for an interaction variable consisting of proportion of independent directors and ownership concentration, which also supports the interpretation of independent directors mitigating horizontal agency problems also through representation.

The second set of independent variables is related to board characteristics. As expected, independence is positively related to accountability indexes and all four tests provide highly significant results ( $t = 2,914$ ,  $t = 2,537$ ,  $t = 2,861$ ,  $t = 2,522$ ). This indicates that independent directors are more inclined to communicate their accountability, which is in line with hypothesis three, as well as majority of literature on governance and disclosure. From representation perspective, besides being connected to remote representation, an elevated accountability index can also be interpreted as improving the reputation of independent directors in the director market.

In the case the CEO of the company had a dual role as also the Chairman, the relationship to accountability indexes became negative, being significant on all tests ( $t = -1,743$ ,  $t = -1,667$ ,  $t = -1,792$ ,  $t = -1,710$ ), indicating that the influence of top management in the board may reduce accountability of other board members. Number of meetings had no relationship with disclosure index, which was against assumptions. A potential explanation could be that disclosure of accountability is related to symbolic representation, and that there might be a disconnect between formal and real power of representatives.

Table 5 Regression results

OLS regression results for the accountability index (A\_INDEX) as the dependent variable, including financial sector (1a and 2a, N=600) and excluding it (1b and 2b, N=491). Coefficient for each variable is shown with t-statistics in parenthesis. \* denotes significance at 10 % level, \*\* at 5 % level and \*\*\* at 1 % level.

	Model			
	(1 a)	(1 b)	(2 a)	(2 b)
Intercept	-3.669 (-1.257)	-3.968 (-1.289)	-3.963 (-1.352)	-4.516 (-1.456)
Dominance	1.594** (2.255)	1.843** (2.238)	1.234 (1.619)	1.617** (1.833)
Family	-2.468** (-2.486)	-0.088** (-2.182)		
Other dominant	-0.488 (-1.517)	-0.655* (-1.759)		
State			0.891* (1.933)	0.921* (1.746)
Widely held			0.534 (1.589)	0.676* (1.769)
Independent	1.725*** (2.914)	1.706** (2.537)	1.694*** (2.861)	1.695** (2.522)
CEO_COB	-0.553* (-1.743)	-0.612* (1.667)	-0.569** (1.792)	-0.630* (-1.710)
LN_BS_EUR	0.049 (0.641)	0.072 (0.729)	0.044 (0.571)	0.071 (0.765)
Culture	0.076*** (8.369)	0.077*** (7.337)	0.075*** (8.194)	0.076*** (7.249)
Observations	600	491	600	491
Adjusted $R^2$	0.127	0.125	0.125	0.125

Of the control variables, culture proxied by Hofstede index of power distance was positively and strongly related to disclosure. This result may be due to differences in reporting practices, Latin European countries having more detailed governance reports, which may also reflect their common civil law tradition (LaPorta et al. 2008). Somewhat surprisingly, a traditional strong association of company size and disclosure of accountability was absent from all test results. In addition, the results for various industries, which are not separately presented, were not statistically significant and indicate that there is no isomorphic reporting process (Dimaggio and Powell 1983) in specific industries that would lead to a common culture of accountability.

Overall, the models provide support to the main hypotheses on representation, boards being more accountable for corporate decisions in case of agent owners, ownership being dispersed or state being the main shareholders. On the other hand, board accountability index is negatively related to the two dominant ownership types, family and other, which can reflect face-to-face accountability, large shareholders having direct access to board members, or it may also mean that boards have less accountability in the presence of a dominant shareholder. Additionally, test results for the link of share of independent directors and disclosure index were positive and significant, indicating that independent directors increase remote accountability towards distant shareholders. The results can also be interpreted to reflect director market concerns of board members – transparency signals potential electors of directors’ capabilities as representatives of shareholders.

#### **4. Discussion**

This paper introduced a refined model of agency theory, seeing corporate governance as a triangle, and where board has a distinct but interrelated role. This model was called principal-representative-delegate model of governance, and it combined theory of representation arising from political theory with theories of accountability and delegation having their foundation in various fields of economic studies.

In order to investigate if the PRD model would provide additional insights to corporate governance, the empirical part of this paper investigated the relationship between board and shareholders, using disclosure as a lens of analyzing if and when board acts as trustee and when as delegate of shareholders. It was assumed that if a company had a clearly identifiable dominant shareholder, the level of disclosure would be reduced, demonstrating face-to-face accountability towards such dominant shareholder, and indicating characteristics of a role of delegate, i.e. directors acting in the interests of largest shareholders rather than building their support from accountability to shareholder base as a whole. Such a situation would also support the classical horizontal agency problem, large

shareholders influencing corporate decision-making through a close relationship with the board. On the other hand, in situations where either there was no dominant shareholder or if state as an agent owner was the largest owner, board disclosure was more extensive, indicating a role of trustee rather than a delegate, and showing what accountability theorists call remote accountability, accountability arising from disclosure to distant shareholders with little direct contact with board members.

Besides ownership characteristics, board independence was also related to amount of disclosure. This was interpreted to indicate directors' own motivation to market their skills in the director market, not only to the company they are currently serving but also to other potential electorates in other companies.

From theory perspective, this analysis showed the strength of representation theory in analyzing corporate governance, seeing governance in large publicly held companies as a subset of a larger societal issue, how the interests of a large number of ultimate beneficiaries are channeled into a single decision-making organization capable of action. It was shown that the postulates of agency theory do not fit well into understanding board motivation, and thus an alternative approach better suitable for board analysis was introduced. Theory of representation provides a novel approach to board study, complementing not only agency theory but showing that alternative approaches, such as stewardship theory or resource dependency theory can be seen as variations of the more general problem of representation. Stewardship theory of management has usually been presented as an alternative dualistic model to agency theory, assuming that top management can have organizational, collective motivation to act in the interests of others rather than the purely self-interest model of an agent (Davis, Schoorman and Donaldson 1997), or in the case of boards, stewardship theory sees trust as the principal concept for board behavior (Huse 2007), which closely resembles the role of trustee described above. One of the four types of representation for Pitkin (1967) was substantive representation, where representatives are chosen for their substantive qualities appreciated by their electors, a concept similar to the basic idea of resource dependency, boards providing skills companies otherwise might be lacking (Huse 2007). Thus it can be concluded, that by demonstrating the applicability of theory of representation to corporate governance, we can

bring a novel and potentially more comprehensive approach to understanding the distinct relationship between board and shareholders in the governance triangle.

## **5. Summary**

This paper started with the argument that the traditional principal-agent model requires additional insights in order to understand corporate governance, at least in large publicly listed companies in Europe. It was argued that the relationship between board and shareholders does not correspond to the two main characteristics of agency relationship, incentives and control, and a new principal-representative-delegate model was proposed as an addition to classical agency theory. This paper does not argue that principal-representative-delegate model would be a global model of governance, rather it fits situations where a very large number of beneficiaries are represented by elected few, who are granted extensive powers to act on shareholders' and indirect beneficiaries' behalf. Such a complementary approach is supported by theoretical work by Aguilera et al. (2008), who argue that governance solutions are contingent to situation-specific factors, and that one size does not fit all.

Representation theory sees trustee and delegate as the two basic forms of representation. In the first, representatives (board of directors) act on their own judgment as trustees, distancing themselves from shareholders after they have been elected, while in the second, boards more truly attempt to reflect the opinions of their electors, acting as delegates. In order to analyze the nature of representation, it was concluded that representation requires accountability, and a proxy of accountability was created from disclosure of matters under board decision control. It was further assumed that clearly identifiable dominant owners have less need for disclosure of board accountability than institutional or public sector shareholders. Considering the intrinsic motivation of board members, director independence was found to be related to disclosure of accountability, which could be explained by director market considerations.



Empirical tests based on disclosure of board rules in 600 largest European companies by market capitalization provided support to the two main sets of hypotheses. Representation in companies with clearly identifiable dominant shareholders was seen related to face-to-face accountability, reducing the relationship between directors and minority shareholders to symbolic or formalistic representation. On the other hand, representation in widely held companies or firms with agent owners as largest shareholders is more transparent, and although higher disclosure can be connected to remote representation, directors can be seen better accountable to the whole shareholder base.

The second main result was the positive relationship between director independence and board disclosure. This can have two complementing explanations. Independent directors may act as Burkean representatives of the whole shareholder base, and disclosure reflects process accountability and independent judgment. On the other hand, the link between independence and disclosure may also reflect director market concerns, process accountability conveying abilities of independent directors and improving their chances of being re-elected or elected to other boards.

Disclosure of board rules is not a panacea for all ills. There are several caveats; disclosure of board rules may create only symbolic representation (Pitkin 1967) by presenting a comfortable image or well-structured hierarchy of decision-making (Roberts 1991). Formal structures may not have real impact, and process accountability may have no relationship to outcome accountability as real power may be separate from formal power.

The practical relevance of this paper arises from accountability of directors. Principal-representative-delegate model is relevant to how directors are elected. Current ways of electing corporate representatives; back-room negotiations leading to proposal of candidates is opaque, and does not guarantee a true representation of preferences of the whole shareholder base. If we accept Burke's concept of representation as preferable basis for governance, increased transparency and of the election process could also lead to higher accountability and thus better quality of representation. Principal-representative-delegate model could also have consequences to incentive systems. If we see top management as delegates of boards rather than independent agents, we need to ask if compensation systems built on

selfish assumptions of agency theory, predominantly using incentives as a source of motivation, are appropriate for a management that has limited authority and accountability shared with directors.

There are several avenues for future study for the principal-representative-delegate model. We would need to understand better the election process of boards as shareholders' representatives, how management, current board and its committees, consultants and largest shareholders influence the search and selection process of directors. Second main area of potential future research relates to differences in preferences of various types of shareholders and their link to representation. Research of shareholder expectations on representation and analysis of how these are communicated to directors would provide additional understanding of his relationship. A third potential area could be further analysis of how directors correspond to various concepts of representation, in order to better understand how shareholder interests are conveyed to corporate decisions.

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## **Essay 3**

### **Power and decision control**

An earlier version of this paper was presented in the 37th Annual Congress of the EAA in Tallinn, May 2014

**Abstract:**

Power is a concept rarely used in corporate governance studies. In board research, it can be analyzed both from process and outcome perspective, what is the influence of directors on material decisions and if such decisions have any impact on actual outcomes. This paper takes the process view and investigates the power split between boards of directors and managements, using unique hand-collected material from Matters Reserved to the Board in 600 largest publicly listed European companies by market capitalization.

Board rules open a new window for researchers on how directors use their wide powers. Thresholds of decision rights determine the boundaries of power between board and management. If decision thresholds are too lax, boards may not properly represent shareholder interests, while too extensive powers translate boards into managements. Decision rights can also be analyzed against classical horizontal and vertical agency problems. In the empirical part of this study, it is shown that horizontal agency problem between dominant and minority shareholders has little impact on the way boards exercise power. However, traces of vertical agency problem are found in dual leadership, a combination of CEO and Chairman of Board roles being connected to lower board decision rights. Independent directors are also more likely to be connected to increased delegation, reflecting wider information gap between board and management.

Key words: Corporate governance, Power, Decision control, Board rules

## **1. Introduction**

Power is a concept inherent in any organization. It can be seen both from *ex ante* as well as *ex post* perspective, separating intentions from outcomes. The classical definition of process (or social) power is an ability to influence on how people act (Turner 2005). However, process power does not necessarily lead to intended targets, as influence may not impact actual outcomes (Dowding 2011, p 523). This distinction between process and outcome power is useful in corporate governance research, an essential question of which is investigating if formal powers of corporate actors, based on rules and regulations, lead to acts and decisions that have real observable economic outcomes attributable to shareholders (Aghion and Tirole 1997).

Power in corporate governance is split between various actors. Shareholders may have ultimate power as ownership gives them legal rights to exercise control (Grossman and Hart 1986). However, shareholders only create a framework of control, seldom participating in actual decisions. They delegate the vast majority of their decision rights to their elected representatives, board of directors, which can be considered as the epicenter of corporate powers (Licht 2014). While the impact of shareholder power has been extensively researched, board powers and the division of power between board and management are still not well understood, although they are more relevant for the day-to-day decision-making than rarely convened shareholder meetings. The allocation of decision rights determines which issues are reserved for board decision control and which are further delegated to management. This separation of board and management powers is the subject of this study.

Research on limits of power focuses on governance processes rather than their outcomes. The rationale for this approach arises from the difficulty of proving an empirical link between indicators of governance and financial outcomes (Pettigrew 1992, Daily Dalton and Canella 2003, Aguiliera et al 2008). The endogenous and exogenous factors influencing corporate performance are so numerous that observing the impact of single governance factors is bound to be challenging. Moreover, extant research

has struggled to penetrate the inner workings of governance, as boardrooms are still clouded with a veil of secrecy (Pettigrew 1992). It has rather attempted to find a connection between externally observable governance characteristics and corporate outcomes, bypassing the mechanism of influence between the two. By studying decision processes we can fill this research gap and provide a glimpse on how decisions are made in boardroom, what are the determinants of formal interaction between directors and management.

Thresholds of decision rights are a crucial element of governance, as boards have limited resources for decision control. An average board in large European companies meets only 8 times per year<sup>1</sup>. Firms differ on how they divide decision rights between directors and management, and this division is instrumental in understanding board's role in corporate governance. If decision rules are too lax, boards might not properly represent shareholder interests, while too extensive decision rights translate boards into de-facto managements. This paper contributes to board literature by investigating limits of power as defined in Matters Reserved to the Board, Board Charters, Board Regulations or board rules with any other name<sup>2</sup>, to answer the question how the allocation of decision rights between directors and management is determined and what it implies for theories of governance.

Information on limits of power is widely available in Europe, although it has been neglected in extant studies. The empirical part of this paper is based on board rules of 600 largest European companies by market capitalization<sup>3</sup>. This material is used to investigate the determinants of power in corporate governance, and especially the boundaries between directors and management. The results from the study demonstrate that the classical horizontal agency problem of governance, resulting from concentrated ownership structures is quite irrelevant to the way boards allocate decision rights, highlighting the need to see board as an independent actor with a distinct role in corporate governance. Ownership concentration either as a

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<sup>1</sup> Based on the empirical material of this study. In addition, directors meet also in various board committees, although generally the full board is the decision-making body.

<sup>2</sup> Matters Reserved to the Board is a term primarily used by UK companies, but these rules have several other names in Europe, such as Board Charter or Board Regulations. This paper uses "board rules" as a generic term for such documents

<sup>3</sup> EuroSTOXX 600 as of 25.8.2012

percentage of voting rights of as a presence of a clearly identifiable dominant owner had no impact on how powers are split between board and management. On the other hand, evidence was found that the duality of CEO/Chairman of the Board roles reduces board powers, suggesting that such structures support continued existence of vertical agency problems. Moreover, independent boards proved to be less stringent controllers of management, which can be seen either as a proof of information gap influencing decision-making (Harris and Raviv 2008) or independence leading to more efficient decision-making structures, independent directors having the skills to concentrate on most material issues. Statistically significant evidence was also found that board activity, measured by number of meetings, was connected with lower management decision rights, an intuitive result that is clearly endogenous. The practical relevance of these results is that current governance standards seem to ensure that boards are efficient solutions for controlling horizontal agency problems between dominant and minority shareholders in decision control, while regulators should consider further restrictions on dual leadership roles that still pose challenges on boards' ability to control the management.

This paper is arranged as follows. First, the previous literature regarding boards, corporate governance and decision control is reviewed. Second, a theoretical model of sources of power in a corporation is developed, defining the *power function* of a firm. In the empirical part, ownership, board characteristics, management and company-specific factors are analyzed as determinants of how powers are split between board and management. After discussing the results, conclusions are drawn on their impact on theories of corporate governance and ideas for future research are proposed.

## **2. Literature review**

### **2.1 Power and decision rights**

Political scientists separate between hard and soft power, power to coerce and power to persuade. These concepts are also useful in corporate governance. Hard power arises from the ability to get what you want through enforcement of rules, while soft power depends on people being self-motivated to reach the intended outcomes (Nye 2004). Similarities to classical agency theory (Jensen and Meckling 1976) are evident, hard power corresponding to control through coercion, while soft power and incentives both are based on self-interests of agents. Similarly to political scientists, Huse (2007), while discussing board powers, divides power into direct and indirect, direct being based on formal delegated powers of directors while indirect concerns boards' ability to influence opinions. Huse also discusses conscience controlling power, by which he means behavioral techniques such as persuasion, education and manipulation and institutional/structural power.

Aghion and Tirole (1997) provide a complementary angle, differentiating between formal and real power, corporate bodies having formal power arising from rules, regulations and procedures, while real power may lie in the hands of individuals preparing or executing the decisions. Moreover, power can be divided between process and outcome power, this textbook distinction separating ex ante capability to influence how others act from capability to influence actual outcomes (Dowding 2011).

Although the term power is rarely used in corporate governance research, it is implicitly present in a large body of literature. The link from governance structures to corporate outcomes is essentially a quest for a link between process and outcome power, if formal power of shareholders and boards impacts risk position, financial results or valuation of a company. Otherwise power lies with factors outside their control, either within organization unable to execute intended outcomes, or with external actors, behaving in

ways unanticipated in the decision process. Various mechanisms have been designed to ensure that shareholders have real power over management so that delegation of decision rights leads to intended outcomes. Unfortunately, extant research has not been able to establish the link between formal and real power, as empirical tests have not proved any conclusive link between shareholder or board characteristics and financial results (Daily, Dalton and Canella 2003, Ees, Gabrielson and Huse 2009). There may be several reasons for the lack of evidence. Due to regulatory convergence, governance solutions may have become so uniform that remaining differences are too subtle for researchers to observe in outcomes. Moreover, financial outcomes are dependent on such a large number of factors internal and external to corporations that data may become too noisy to provide any significant results. Thus following Pettigrew (1992) and Ees, Gabrielson and Huse (2009), a more fruitful approach to decision control in corporate governance focuses on processes, who decides what and what determines the division of power between various actors. This view sees governance as a process<sup>1</sup> to resolve a problem of multiple preferences, how to create a mechanism that represents shareholder interests and channels them into corporate acts, targeted to create intended results.

Corporations are hierarchies, in which decision rights are usually constructed as pyramids, fewer and larger decisions being made on higher levels of the organization. The boundary between shareholders and board is clear, defined by laws and articles of association of the company. Decisions that are material enough to be brought to shareholders to decide are few, either procedural (changes in articles of association), directly related to shares (dividends, new issues), choices of representatives (board and auditors) or in extreme cases related to major transactions like acquisitions. However, very few articles of association provide explicit limits when a matter of significance would need to be brought to shareholder meeting for decision<sup>2</sup>.

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<sup>1</sup> Process as a term is used here narrowly, meaning the procedural steps of decision-making, rather than the wide definition of process studies, which “address questions about how and why things emerge, develop, grow, or terminate over time, as distinct from variance questions dealing with covariation among dependent and independent variables”. (Langley et al 2013)

<sup>2</sup> There are two major exceptions in Europe. In the Netherlands several companies have included a rule relating to mergers and acquisitions, when the board obliged to submit such

Articles of association can be considered as rules defining the limits of shareholders' formal power. Legal scholars often focus on the role of formal rules in preventing crises and scandals in corporation (Hopt 2011), providing safeguards against gross misbehavior. Public outcry over well-known failures in governance may distort the understanding of the relevance of such rules, as they provide legitimacy to governance structures but give little guidance on how to make decisions that are relevant for the economic outcomes of a company. Extensive research exists on shareholder rules and their impact on corporate outcomes. For example, changes in articles may have indirect influence on corporate decisions and the risk profile of the firm (Cunat, Gine and Guadalupe 2012). Gompers et al (2003) built an index of shareholder control based on the articles of association of companies, being able to show that companies with a higher "G-index" provided superior equity returns in 1990's compared to other listed companies. Probably due to a learning effect, the phenomenon has not been repeated thereafter (Bebchuk, Cohen, Wang 2011).

However, owners' direct control has also clear weaknesses. First, ownership structure may not be optimal for control. Shleifer and Vishny (1997) argue that in large corporations the fundamental agency problem is horizontal, between large and small shareholders rather than vertical, between owners and management. With controlling shareholders, the rights of minority owners may be subject to opportunism by the dominant shareholder (LaPorta, Lopez-de-Silvanes, Shleifer 1999; LaPorta et al. 2002; Bebchuk and Hamdani 2009), leading to non-optimal outcomes. In most extreme cases the controlling shareholder may even be protected by legal structure, as in KGaA's and Sarl's <sup>1</sup> in Germany and France. In order to overcome the horizontal agency problem, boards are supposed to represent all shareholders, and thus mitigate the dominant shareholder problem and provide protection for the minorities (Armour, Hansmann and Kraakman 2009).

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transactions to shareholders. The typical limit is 25 % of the total assets of the company. In UK it is common to include a borrowing restriction in the articles, limiting the borrowing powers of the board either to a specific monetary amount or to a maximum gearing, typically in the range of 200-300%.

<sup>1</sup> KgaA (Kommanditgesellschaft auf Aktien) is a German form of a publicly listed limited partnership, in which another company is the general partner that actually runs the company. A similar structure, Sarl (Société à responsabilité limitée) exists in France and Southern Europe. In our sample of 600 companies, three are of such variety.



Dispersed ownership may also lead to weaker corporate governance and create a free-rider problem as none of the shareholders is willing to assume the costs of stronger control, paying for talent to work on the board to represent shareholder interests. (Acharya and Volpin 2008, John and Senbet 1998). Moreover, Jensen (1989) argues that institutional investors are quite powerless, and McCaherty, Sautner and Starks (2010) find that with the exception of largest shareholders, institutional investors rather vote with their money than participate actively in the governance, leading to a power vacuum to be filled by other actors.

Shareholder powers are hampered by the information gap between owners and management, and thus models of direct shareholder decision control are impractical and costly to administer. Decision control is dependent on the quality of information (Harris and Raviv 2010) and the ability of decision-makers to act wisely. Enlarging the number of decisions brought to shareholder choice would require deep knowledge from a large group of owners and investors with diversified holdings would need to understand the inner workings of hundreds of companies. Thus decision control requires separation of ownership and decision expertise, in essence delegation of shareholder powers to their elected representatives, board of directors.

## **2.2. Board powers**

The division of power and its impact on decision control is analyzed in this essay against a simplified model of corporate governance, which identifies three distinct roles: *risk-bearing* by the shareholders, *decision control* by the board and *decision management* by the CEO and the top management team. Decision control can further be divided into ex ante ratification of decisions and ex post monitoring of their outcomes (Fama and Jensen 1983). Ratification concerns matters that require a formal decision by the board<sup>1</sup>,

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<sup>1</sup> Board is defined as the shareholder elected body of representatives to which shareholders delegate all powers not specifically reserve to them in the Articles of Association. Thus supervisory boards in Germany are covered by this definition, but more representational bodies that are separate from actual boards of directors are not. Board is also a body that is clearly separate from the operative management.

implying a direct responsibility for their outcome. Such matters may be formally dictated by the board rules or judged by the management to be material enough to require board approval.

Decision control is board's primary means of using power. Management initiates a decision usually with a proposal that has terms and conditions attached to it. A board has control over the management by either approving, amending or denying a proposal. A decision provides management with the authority to act (Adams & Ferreira 2007). Decision-making power within a company is limited by its financial resources, and thus power can be seen as influence over resources that are in short supply (Rajan and Zingales 1998).

Although rules are determined by the board, the relationship between board and management has two directions. A board cannot function without the co-operation of the management. Holmström (1984), Adams and Ferreira (2007) and Harris and Raviv (2008) all highlight the *role of information* in decision-making. Without proper access to inside information, boards are not efficient decision-makers, leading to loss of well-being to shareholders. Aghion and Tirole (1997) argue that a board which has formal authority over a decision can always veto the proposal of the management, but will not do it if the management is better informed, and if its objectives are broadly in line with the board's. A poorly informed board has few alternatives but to rubber-stamp the management proposals as it does not have a better alternative. The management has, in such cases, real authority over the board. Delegation may be rational behavior for a badly informed board, although it means loss of control and thus diminution of board authority.

Besides formal board decisions related to legal liability<sup>1</sup>, there are few clear rules on what the boards should decide. Even soft legislation leaves the issue opaque. For example, in UK the listing rules state that "The board should have a formal schedule of matters specifically reserved to it for decision"<sup>2</sup>, to which the UK combined code adds "The annual report should record: a statement of how the board operates, including a high level statement of which types of decisions are to be taken by the board and which

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<sup>1</sup> Borrowing decisions are probably the most common formal decision requiring board approval.

<sup>2</sup> UK Listing rules, Code of best practices, April 2002

are to be delegated to management”<sup>1</sup>. This leaves the question of materiality and decision control open for the boards to decide. Matters that are not specifically mentioned in the board rules implicitly belong to the powers of the management. In case the decision limits are not clearly defined, the management has a possibility to influence board powers. Useem and Zelke (2006) find that executives still determine the board agenda and thus dominate the matters which the boards decide. Clearly, without established guidance, scope and depth of board powers differ, and there is a wide variety of explicit definitions of materiality.

Even though a board has formal power, there is no clear evidence if this formal power leads to real power. Most of the research has bypassed what happens in the boardroom, and rather focused on how observable facts, such as ownership structure or board composition, if they impact corporate outcomes (see Adams, Hermalin and Weisbach 2010). The acts of the boards and their consequences have received limited attention<sup>2</sup>, and only few case studies (e.g. Johanson 2008, Schwarts-Ziv and Weisbach 2013, Huse and Zattoni 2008) have been able to penetrate the walls of the boardroom. Research on board rules thus provides a novel and potentially fruitful window into how board and management interact.

Although shareholders and boards have the formal power in corporations, real power can also be in the hands of other stakeholders. Already Jensen and Meckling (1976) argued that debt provides effective control over management as repayments and interest reduce the amount of funds available to management for non-optimal purposes. Financial markets also control corporations, as underperforming or undervalued companies are at the mercy of the takeover market, which may lead to replacement of owners and boards, and threaten the job safety of the management. Already a decline in corporate valuation indicates market dissatisfaction with the management and creates an incentive to act.

As a conclusion, decision control is a means to have power over how people act, influencing the process of decision-making. Such formal power may not lead to real power, as actual outcomes may be different from intended outcomes. Formal power is primarily hard power, based on decision-making

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<sup>1</sup> Combined code, schedule C, A.1.1.

<sup>2</sup> with the exception of CEO hire / dismissal decisions

rules and means to control their enforcement. Soft power is more difficult to observe, although it is evident that behavioral factors incentivize board to find means to influence corporate outcomes not only through formal decisions but also through motivation of top layer of organization responsible for decision management. Next, this article turns to empirical analysis of formal power and determinants thereof.

### **3. Research questions and hypotheses**

#### **3.1. Decision rules and thresholds of authority**

Definition of decision rules can have a major impact on the efficiency of the boards and on how they fulfill their role as the representatives of shareholder interests. Not only can the lack of decision thresholds lead to management-determined agendas, but badly defined rules may focus board work on insignificant matters and waste the limited time and resources of the directors (see Johanson 2008). Boards may also omit important matters that they should consider, if such matters have not been included in board rules.

The empirical part of this study is based on the numerical decision limits determined by the board. The core questions are related to the *identification* of decisions of importance, *thresholds* of decision control and *determinants* of how formal power is divided between board and management. The approach is symmetrical to analysis of management decision rights as a residual of board decision rights. Although rules can be seen as guidelines, they provide plenty of signal information on how the power is split between the board and management. They provide direct evidence on what the boards consider to be material decisions which cannot be left to the management only.

Boards have an interesting self-regulatory role, as their rules are written by boards themselves<sup>1</sup>. Rules often include lists of matters and clear monetary limits of authority that reflect the board's definition of materiality. The most typical limits are traditional, focused on investments (or acquisitions), even though purchases of fixed assets are not necessarily the most material decisions a company can make. Besides investments, boards also define limits on commercial contracts, financial commitments and technical matters like litigation or taxes. This paper focuses on investment limits, which are the most common thresholds established by directors, and they are also easily comparable across companies. An obvious follow-up question, though, is why certain boards include a wider variety of matters on their agenda than the others<sup>2</sup>.

Monetary limits as such are not comparable across companies, but this can be overcome by relating them to key financials. 100 million investment for BP is not equal to 100 million investment for Daily Mail. Limits can be made comparable by relating them to a common financial yardstick, such as market value of equity, which measures how much of shareholders' wealth can be put at risk without an authorization from their representatives, boards of directors. The higher the threshold, the fewer decisions require board approval and the less decision control the board retains. This approach complements the analysis of disclosure of accountability as presented in the second essay. Materiality thresholds measure the depth of decision control between board and management, while the extent of disclosure of board rules indicates the accountability of directors to shareholders. The second essay also considers the full width of decision control, while this third uses only investment decisions as its yardstick.

In order to understand the role of the board in decision control, we need to ask if structural factors impact the limits of power, or if all rules are situation-specific, contingent to company-specific conditions. The four determinants usually used to analyze the impact of corporate governance on

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<sup>1</sup> Although the responsibility for drafting and/or approving rules is not always explicitly expressed in rules, there was no evidence in any of the material of investigated 600 companies that such rules would be subject to shareholder acceptance or even presentation in shareholder meetings. Rather, several rules included even a specific date when boards had approved them.

<sup>2</sup> Various areas of decision control are discussed in first essay of this dissertation

financial outcomes are ownership, board characteristics, company-specific factors and the role of management. Being commonly used in extant research, they provide a natural basis for analysis of governance processes. Next, each one of them is discussed in order to develop the research hypotheses.

### **3.2. Determinants**

#### **3.2.1. Ownership**

The research on ownership has focused on the relationship between shareholder structure and firm performance, but it provides little direct evidence of the relationship between ownership and decision control (Demsetz and Lehn 1985, Thomsen and Pedersen 2000, Anderson and Reeb 2003, Cornett et al 2007). There are basically three different routes large owners can influence decision-making. In a few large publicly listed companies owners are also part of management, which raises the issue if boards' formal power can result in real power in such situations. In the second case owners are separate from the management, but use informal routes of influence, by-passing the formal route through the board. The third, most legitimate channel of owner influence is through the board, either having direct representatives as members of board or through informal influence on board decisions.

Two most common ownership-related variables in corporate governance research are concentration and classification of ownership. The basic assumption is that the more concentrated the ownership the higher the risk of horizontal agency problem, large shareholders expropriating the small ones (Shleifer and Vishny 1997). It is also commonly assumed that in widely held companies governance is different from companies with a dominant owner (Connelly et al. 2010). However, if there is an impact from dominant shareholding, there needs to be a medium that conveys that influence. Even if large owners can directly use real power over the management, formal power is in the hands of the board. Thus in case horizontal agency problem

exists, we should be able to observe ownership influence in board rules, boards in companies with dominant owners behaving differently from widely held companies.

In this study, in addition to voting share of the largest owner, the nature of the largest owner is also investigated as a determinant of shareholder influence on board decision control. Focusing on the single largest owner is in line with past research (Faccio and Lang 2002, LaPorta et al. 1999), supported by the empirical sample, where an overwhelming majority of firms with a dominant owner has only one major shareholder. 11 different types of largest owners were identified, but they were further simplified into four main types, family controlled companies, state controlled companies, companies with any other type of clearly identified dominant owner and widely held companies. In line with Dahya, Dimitrov and McConnell (2008), dominant shareholder was defined as an owner that controls at least 10% of the voting rights in the firm.<sup>1</sup> However, even if such thresholds are commonly used, there seems to be little evidence as to what level of ownership actually leads to dominance<sup>2</sup>.

The basic hypothesis is that horizontal agency problem can be observed from board rules. In the case a company has a clearly identified dominant owner, or in the case ownership concentration is high, board has less power over decision control as dominant shareholder can bypass directors and directly influence management decisions. This can be formalized as the first research hypothesis:

H1: Ownership dominance has a positive relation to management decision rights.

However, as prior research has not been able to demonstrate a conclusive link between ownership characteristics and firm performance, it can be questioned if this is dependent on lack of formal or real power. In the case no support is found for H1, board rules do not support the idea that dominant owners would be able to influence corporate decision-making through their influence on board powers. On the other hand, if a

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<sup>1</sup> In very few cases there are two dominant owners. in case the largest owner is a clearly identifiable institutional investor, also ownership ratios between 10 % and 20 % were considered non-dominant

<sup>2</sup> See Croci, Doukas and Gonenc (2011) on different definitions of control

relationship between variables is found, then the question is why formal process power does not translate into outcome power.

### **3.2.2. Board characteristics**

Boards are a group of people which make decisions, if needed, based on majority voting, and their internal characteristics impact the way they act. Out of board characteristics, independence has probably received most research focus. General view has moved away from Fama and Jensen (1983), who valued inside directors over external ones, as they have more information on the company's business, and the role of independent directors is now rather seen as value-enhancing (Adams & Ferreira 2007, Harris and Raviv 2008, Acharya, Meyers and Rajan 2011).

Although this study primarily follows companies' own definition if a director is independent or not, the term as such is not analytically very clear. The categorization is conditional of independence of two different bodies, independent of the company and independent of major shareholders. Basically independence of a company means that a director is not employed by a company, although director may have other financial commitments with the company. Companies are generally required to disclose related party transactions, and e.g. board member consulting agreements, or business arrangements with director's employer and the company should be disclosed. However, the judgment when such a relationship hampers director independence is subjective, and the influence on individual directors is impossible to assess.

A second challenge regarding independence from the company is director tenure. In UK, companies are required to disclose if a director has held his or her position for a stated number of years, and classify such a director formally non-independent<sup>1</sup>, assuming that a lengthy service impacts the behavior of a director in such a way that the accountability is not towards shareholders but rather towards people working in the company.

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<sup>1</sup> Some companies clearly struggle with this definition, and examples can be found where a director is described as non-independent based on tenure but "independent of mind"



A third challenge to independence of a company relates to labor representatives, which, for example in Germany, constitute half of board members. In order to complicate matters, such representatives might be nominated by trade unions, and thus they are truly independent of the company management and its shareholders, although have a strong link to its staff. In practice, labor representatives have consistently been categorized as dependent on a company in this study.

The second category, independence of large shareholders is also subjective. First, there are no common rules of what constitutes a large shareholder, and secondly, relationships to dominant shareholders may be based on informal trust relationships without any direct family or employment relationships. In addition, for example in Spain a directorship may actually be nominal to a legal personality, even if in fact is held by a nominated person.

However, considering the importance governance codes set to director independence, it must be assumed that director classified as independent truly are so, even if their personal relationship might cast doubts on single person level. Thus this paper follows company disclosure, and in the few cases where such qualities have not been explicitly disclosed, assessment has been made based on the personal biographies of directors. In decision control, the role of independent directors is interesting. Harris and Raviv (2008) argue that independent majority may be value-reducing in situations where information costs are larger than agency costs. Decision control by independent directors in situations where they lack necessary knowledge may lead to non-optimal decisions for the shareholders. Consequently, rational behavior for independent directors would be to delegate decision rights to management. Thus a second hypothesis can be made

H2:            Director independence is positively related to management decision rights.

On the other hand, board has several other identifiable characteristics. Allocation of decision rights can also depend on social or cultural factors. Adams (2009) argues that directors with strong personal ties to CEO will rather act as advisors than monitors of management, which would indicate that cultural diversity should increase decision control while cultural similarity should lead to more decision power for management. Gender, internationalization and employee representation are all expressions of

diversity in board composition, and in thus it is assumed that they lead to more formal decision-making process than structures where boards and management share common background characteristics.

H3: Diversity of board is negatively related to management decision rights

Finally, board decision control may also be explained by procedural and firm-specific factors. On average, boards in large European companies meet 8 times per year. Even allowing for two days per meeting, including preparation, a typical board member might use less than one months' work on a represented corporation. Thus as the resources of boards are limited, there should be a negative relationship between time available and decision control. On the other hand, such relationship may be endogenous, lower decision limits leading to a higher number of items subject to board decision control, and thus requiring a more active board.

H4: Board activity is negatively related to management decision rights

In case none of the hypotheses related to board characteristics or procedures has an impact on decision control, a question can be asked if boards actually matter, and if recommendations for board independence and diversity are truly relevant for the way boards act.

### **3.2.3. Management**

Information gap between the management and the board may have implications on how the decision rights are divided. Theoretical models assume that management presence in the board will reduce such a gap (Harris and Raviv 2008), as internal directors have better access to inside information. This would indicate that insider-dominated boards are more powerful than boards lacking sufficient knowledge. However, an alternative assumption can be made for a dual chief executive / chairman of the board structure. The combined leadership may strengthen the management team over board as their ability to make informed decision under dual authority

should be superior to directors. Thus it is assumed that a higher proportion of insider directors shifts decision power towards the board, while duality of leadership supports management role in decision control. As proportion of insider directors is a residual of proportion of independent directors, covered by the second hypothesis, an additional hypothesis is only needed for the duality of leadership:

H5: CEO/Chairman of the board duality is positively related to management decision rights

Even though corporate governance recommendations increasingly press European companies to separate the two roles, still in 112 of the 600 companies in the sample either current or past CEO is the Chairman of the board or Chairman has an executive role in the company, current CEO being Chairman in 81 of these.

#### **3.2.4. Company characteristics**

Company characteristics are commonly used as control variables in accounting research, so in the empirical model, company size, investment intensity and external cultural factors are considered as additional determinants.

Size.

In line with the information gap hypothesis, as the complexity of the matters increases, the ability of board members to take informed decisions decreases (Aghion and Tirole 1997). This may lead to a situation that the larger the company, the less board can have knowledge of actual business decisions, leading to more of the board time being spent on regulatory issues rather than on decision control.

Investment intensity

The dependent variable in the empirical model is related to investment decisions. Although there are no evident reasons

why risks related to long term commitments of funds would vary between companies, it is assumed that investment-intensive companies are more accustomed to investment decisions and thus should have higher decision limits. Total amount of depreciation is used as a proxy of investment intensity, as depreciation reflects past level of investments in a firm.

## Culture

A frequently debated issue in comparative corporate governance is if nationality actually matters (LaPorta et al 2000, 2002, Armour Hansmann and Kraakman 2009). This has traditionally been analyzed either through classification of countries as market or bank-based<sup>1</sup> or by using Hofstede's national characteristics. Considering the high level of integration in European financial markets and power being the subject of the study, power distance is used as a control variable to assess the impact of cultural differences on decision control.

## 4. Model and data description

In order to analyze the division of power between the board and the management, we first need to define the power function of a company. Power in this context is understood as process power, the ability to influence the decisions that have a material impact on the performance, value or risk position of a company. Process approach differentiates this study from the majority of extant empirical governance research, which rather attempts to find relationships connected to outcome power. Considering the various parties that may influence such decision, the basic power function can be written as follows:

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<sup>1</sup> Ownership data on EuroSTOXX 600 companies does not support the separation of countries to market or bank based. There are very few companies where banks would be largest shareholders, and using gearing as an indicator, there is no difference between UK (market based) and continental (bank-based) companies.

$$P = P_{Sh} + P_B + P_M + E + U$$

Where

P	Represents total process power, the ability of various actors to influence material decisions
$P_{Sh}$	Matters that shareholders decide
$P_B$	Matters reserved to the board, which include matters that board has determined to be of such importance that the management does not have the authority to decide alone, or matters that the management has judged material enough to submit for board decision control
$P_M$	Matters that are within the power of the management. $P_M$ is a residual of $P_B$ , as boards set the limits of decision control, matters they keep to themselves, implicitly delegating all other matters to the management. $P_M$ could further be split into $P_{CEO}$ , $P_{TMT}$ and $P_{Staff}$ , <sup>1</sup> but which are outside the scope of this study.
E	consists of factors external to the company, which include all other decision making bodies except shareholders, directors and management. Such bodies include creditors ( $E_C$ ), authorities ( $E_A$ ) and employee representatives ( $E_{ER}$ ) but may include also other parties
U	represents unknowns, decisions that happen without the influence of any the previous parties. Such decisions may include competitor action, natural events, disturbances in financial markets or unauthorized transactions, just to name a few.

The determinants have the following propensities:

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<sup>1</sup> Power of the CEO, power of the top management team and power of the staff

$P_S$  is a constant over a short term, as shareholder powers are clearly defined in the articles of association, and shareholders have delegated all other powers to the board. Even though corporate governance literature includes numerous studies related to  $P_S$ , any direct decision control by large shareholders over what has been defined in the articles represents a violation over the standard corporate governance structure<sup>1</sup>

$P_B + P_M$  is also a constant (C) in the short term,.

In order to test the general model of decision power, we can use the decision limits set by the board as a proxy of  $P_B$ , which consequently defines  $P_M$  as  $C - P_B$ . Besides measuring the limits of power, the value of  $P_B$  also defines how boards understand materiality, assuming that boards are able to prioritize their limited resources to most important issues facing a company<sup>2</sup>. Decision control consists of width and depth of issues within board decision limits. This paper focuses only on the depth, using its most common indicator, monetary limits for investment decisions as the dependent variable, leaving the analysis of other types of decision limits for further study. The investment limit acts as a proxy of board process power, and although the definition of materiality is interesting and important as such, the real research question in this paper is what are the determinants of  $P_B$  and if and how they impact its value.

In a special case where company is in financial distress, the value of  $E_C$  (creditor power) starts to increase in relationship to  $P_B$  and  $P_M$ . As shown by Nini et al. (2012), the breakage of financial covenants represent a situation where  $E_C > P_B + P_M$ , as debt-holders interests dominate the decision control of a company.

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<sup>1</sup> Counterarguments can be made against this basic claim, and there are plenty of examples of attempts of active shareholders to influence corporate decision-making. However, this is against the rules as a standard formulation in the articles of association of the research sample includes a clear delegation of powers to the board.

<sup>2</sup> Practically all boards consider also qualitative tasks of determining strategy, choosing and dismissing CEO and regulatory (audit) control as part of their most important tasks. Anyhow, as there is no variance, these tasks do not differentiate boards from other boards

Thus, in a simplified form, the actual model for board process power is as follows:

$$P_B = \beta + x OWNERSHIP + y BOARD + z MANAGEMENT + w COMPANY + \epsilon$$

where OWNERSHIP, BOARD, MANAGEMENT and COMPANY are generic terms for the proxies of actual empirical variables below.

In order to build the empirical model, we first define our dependent variable:

$P_B$  is investment limit as a proportion of market value of equity

representing the magnitude of the risk involved in major investment decisions. Considering the alternatives to the dependent variable, the closest substitute would be investment limit as a proportion of enterprise (debt-free) value of the company. This would anyhow bring the interests of debt-holders in the equation, which is not relevant in normal circumstances where  $E_C$  is immaterial in relation to  $P_B + P_M$ .<sup>1</sup> Investment limits could also be related to indicators of corporate size, such as total assets, fixed assets or sales. Although such indicators may have merit from company point of view, considering that boards represent shareholder interests, measure related to shareholder value can be considered more relevant for the research questions.

Next we turn to our independent variables:

OWNERSHIP:

DOMINANCE	% of voting rights held by the largest shareholder
FAMILY, STATE, OTHER	(O_TYPE) denotes companies with three different dominant types of owners that have a share exceeding

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<sup>1</sup> Situations of distress, where  $E_C$  starts to increase, are considered in the fourth essay of this dissertation

10 % of the voting power in the company.

### BOARD

INDEPENDENCE	is defined as % of independent directors in a board, including directors independent of the company and independent of major shareholders.
FEMALE	is defined as a % of female directors in a board and used as a proxy of diversity
MEETINGS	Number of board meetings per year, reflecting the level of board activity.

The third set of variables concerns MANAGEMENT.

CEO_COB	Situations where either current or past CEO is the Chairman of the board, or current Chairman has an executive role. This variable reflects both the management influence as well as the information gap between the board and the management. The variable is calculated as a proportion of total number of board members, assuming that the voice of top manager is better heard in smaller teams.
MANAGEMENT	Percentage of operative management as of total board members

And finally as control variables indicators directly related to the COMPANY

LOG_BS	Logarithm of the balance sheet total as a proxy of company size, in Euros.
DEPR_PCT	Depreciation as a percentage of sales, reflecting the fixed asset intensity of the company.
CULTURE	Hofstede indicator of POWER DISTANCE, reflecting the impact of national characteristics. This indicator was chosen as it corresponds to the



research questions related to the division of power  
between boards and managements

Thus the model can be re-written as follow:

$$P_B = \beta + x_1 DOMINANCE + x_2 O\_TYPE + x_3 INDEPENDENCE + x_4 FEMALE + x_5 MEETINGS + x_6 CEO\_COB + x_7 LOG\_BS + x_8 DEPR_{PCT} + x_9 CULTURE + \mu$$

which is the actual model subject to empirical tests

The research material is based on hand-picked data from 600 largest European companies by market capitalization. Of these companies, 325 disclose their internal board rules, and 244 provide monetary limits for investments<sup>1</sup>. The sample was further reduced by eliminating all financial companies, including banks, insurance companies and financial services, leaving a final sample of 202 companies. The exclusion of financial sector is in line with several other studies, as their business model and financial reporting structure are very different from other industries. Moreover, the financial data is from 2011, which was still in the aftermaths of financial crisis, so financial sector valuations might have been abnormally low.

The final sample of companies has 15 different nationalities. This paper assumes *functional governance convergence* for companies in developed economies, in line with Hansmann and Kraakman (2001) and Hopt and Leyens (2004). Investors, boards and management are assumed to adapt their approach to decision management in ways to align the practices according to commonly accepted principles of corporate governance, despite lack of uniform legal environment. Such practices include clear separation of roles of owners, board and management, transparent corporate governance, commonly accepted international reporting practices and oversight by competent authorities. Shleifer and Vishny (1997) and

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<sup>1</sup> Investments, mergers and acquisitions, real estate transactions, disposals

Hansmann and Kraakman (2001) have argued that the integration of global financial markets is driving the integration of governance practices, and national legal environments follow only with a lag. Shareholder as the primary beneficiary of governance forms the philosophical basis of the functional convergence.

The material on companies has been collected from their websites, and includes annual reports, articles of association, corporate governance reports or statements and most importantly, rules of the board<sup>1</sup>. The monetary limits cover four major areas, investments, financial transactions, commercial agreements and technical matters like litigation or tax settlements. Each company may have more than one decision limit related to each area, and the limit may be expressed either as an absolute value, as a relationship to another financial indicator like sales or equity or in commercial agreements even as megawatts. This paper focuses only on the investment limits, and in a few cases where there are several differing limits, the lowest has been used. Such material is not available on any databases, and its collection and coding is not only laborious but requires in-depth analysis of what the boards have actually meant. Although focus on larger companies may create a bias, the measurements used are universal and should be applicable to any size of company. Large public companies are under higher scrutiny by the markets and regulators, have better resources for disclosure and reporting, and the personal liability of board members is higher, also creating an incentive for better disclosure.

Focusing on monetary limits omits certain other matters boards consider important like strategy, CEO choice and regulatory oversight (Adams, Hermalin, Weisbach 2010). However, as all of these belong to the agenda of practically every single board, there is no variation so their impact is difficult to study. Boards can also make decisions that may be of symbolic value like political donations or charity, which do not have direct impact on company performance. Such decisions have been omitted from this study even if boards had disclosed limits for them.

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<sup>1</sup> Sometimes board rules are included in other documents, like document de reference in France or regulatory corporate governance reports in Italy or Spain

The annual reports were used as the source of information for classification of ownership and board structures. The reports were analyzed for the financial year that ended between 31.12.2011 and 30.12.2012. Boards were categorized for their independence, CEO role in the board, management representation, employee representation, internationalization of the board and gender split. Most of the companies disclose such information, but in cases where it was not explicitly provided, the personal biographies of board members were used<sup>1</sup>. In cases where independence was separately disclosed for independence related to the main shareholders or independence of the company, both cases were considered non-independent. Besides the composition of the board, data on number of board members and frequency of meetings was also collected. The company websites were also analyzed for any other potential additional information during 1.12.2012 -29.2.2013.

The largest owners were categorized into 11 main categories<sup>2</sup>, but for the analysis these were further simplified either into four, firms that have Family or State or Other clearly identifiable single owner as the dominant shareholder or companies that are Widely held<sup>3</sup>. It can be questioned if this kind of categorization is internally consistent, if such groups homogenous enough to behave in a similar manner. Anyhow, for the purposes of this study the aforementioned classification is accepted, as it is widely used in corporate governance literature and thus the results are comparable with past research.

The financial data is derived from Orbis databases, using annual information for the accounting year that ends between 31.12.2011 and 30.12.2012. When necessary for financial comparisons, the database has been converted into euros, considering the different closing months of the companies. In case pieces of information have been missing from Orbis, annual reports have been used. The accuracy of Orbis data has been controlled through random checks. The data collection process has included two research assistants,

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<sup>1</sup> This relates mainly to companies based in Germany and Switzerland, which do not require the disclosure of board independence by person. In case nationality of board members has not been disclosed, biographic information like name, past work experience and education has been used. In case where members are from culturally similar neighboring countries like Germany/Austria, categorization may not be exact, but the difference is considered irrelevant

<sup>2</sup> Association, Bank, Corporate, Co-operative, Employees, Family, Foundation, Investment company, Private equity, state and Widely held

<sup>3</sup> There are 73 cases where agent owners hold in excess of 10 % but below 20 % of the votes. These are anyhow categorized as widely held

and more than 10 % of the data has been checked by two persons for potential errors in classification. Furthermore, all data has been reviewed at least twice in order to ensure the quality of data collection and consistency of coding.

Table 1 presents the breakdown of the final sample by country and industry. All of these companies publish their regulatory information on their website, and the overwhelming majority of material is available also in English. There are some minor exceptions where parts of the material (board rules, articles of association or corporate governance statements) are only available in the native language, French, Spanish, Italian, Dutch or German, and in such cases original language versions were used.

Table 1 Breakdown of finals sample by industry and by country (N=202)

Countries are BE = Belgium, CH = Switzerland, DE = Germany, DK = Denmark, ES = Spain, FI = Finland, FR = France, GB = Great Britain, IE = Ireland, IT = Italy, LU = Luxembourg, NL = Netherlands, NO = Norway, PT = Portugal, SE = Sweden

Industry																
	BE	CH	DE	DK	ES	FI	FR	GB	IE	IT	LU	NL	NO	PT	SE	N
Automobiles & parts			2				3			2						7
Basic resources							1	7					1		1	10
Chemicals	2	2	4				2	2				2	1			15
Construction materials	&	3					4		1						2	10
Food & beverages	1	1	1				3	2		1		3				12
Healthcare	1	4		1			3	2							1	12
Industrial goods and services		4	5		1	1	10	9		3		7			1	41
Media							4	4		1	1	1			1	12
Oil & gas					1		3			2		2	1	1		10
Personal & household goods		1	3				2	2		2					1	11
Real estate	1	2	1				4	3				2			1	14
Retail		1					3	3				1		1		9
Technology		1	1				6	1		1						10
Telecommunications	1	1					1	2		1		1				7
Travel and leisure							3	6								9
Utilities			2		2		4	1		4						13
N	6	20	19	1	4	1	56	44	1	17	1	19	3	2	8	202

Table 2 provides the descriptive statistics for the key variables. Ownership concentration is common in Europe, half the companies having an owner with at least 20 % share of votes. Independent directors represented on average 60 % of board members, and 70 % of companies had independent majorities. Lack of independent majorities can be explained by a large proportion of companies with a dominant shareholder, but even 10 % of companies with no dominant owners had a non-independent majority of board members. Labor representatives have been classified as non-

independent, which somewhat impacts the average, specifically due to German co-determination law requiring half of supervisory board members being labor representatives. Diversity in boards is still modest, non-nationals forming on average 23 % and female members 17 % of boards. Nationality is not a clear concept in Europe, as neighboring countries can be culturally integrated and thus if a German director in an Austrian company is “foreigner” is debatable. An average board in the sample companies has 11 members, and boards meet annually 8 times.

The dependent variable in the empirical model is board determined threshold for investment limits subject to its decision control. As an absolute value, the average value is 125 million euros, heavily impacted by the very large companies, as median value is only 30 million. However, for the analysis of decision rights, a more meaningful number can be calculated by relating the decision threshold to market value of equity, reflecting the amount of shareholder wealth involved in such a decision. The median value was 0.6 % and average 1.5 %, half of the values being within a range of 0,2 % and 1.5 % of market value of equity, providing boards with a reasonable benchmark for determining materiality in decision control. Median values related to accounted equity (0.9 %), sales (0.5 %) and balance sheet total (0.2 %) provide additional guidance for determination of decision rights. A comparison of decision rights across dominant ownership types shows little differences, median values being within a range of 0.4 % and 0.7 % of market value of equity.

Table 2 Descriptive statistics

	Mean	Std Dev	Min	Q1	Median	Q3	Max	N
<u>Ownership</u>								
- Voting rights	26%	21	2%	9%	20%	36%	90%	202
<u>Board</u>								
- % Independent	60%	22	11%	45%	57%	72%	100%	202
- % Part of management	10%	14	0%	0%	0%	17%	53%	202
- % Foreign	23%	23	0%	0%	17%	36%	91%	202
- % Female	17%	11	0%	9%	17%	23%	75%	202
- Number of members	11.3	3.6	3	9	11	13	22	202
- Number of meetings	8.5	3.1	3	6	8	10	22	202
<u>Financials (Billions of Eur)</u>								
- Sales	1.5	23.9	0	1.9	6.0	17.7	167	202
- Balance sheet total	22.9	36.5	0.4	3.7	8.2	25.8	232	202
- Total equity	7.2	11.3	-1.0	1.4	2.9	6.9	68	202
- Market value of equity	11.9	19.6	0.8	2.6	5.2	11.4	147	202
- Enterprise value	16.2	24.1	0.7	3.1	6.8	15.4	159	202
<u>Investment limits (IL)</u>								
- Nominal amount (MEUR)	125	301	0.1	10	30	119	3089	202
- As of accounted equity	2.1%	4.8	-32.5%	0.4%	0.9%	2.6%	31%	202
- As of market value of equity (MVE)	1.5%	2.7	0.0%	0.2%	0.6%	1.5%	20%	202
- As of enterprise value	1.0%	1.9	0.0%	0.2%	0.5%	1.1%	18%	202
- As of sales 1)	14.3%	175	0.0%	0.2%	0.5%	1.4%	..	202
- As of balance sheet total	0.8%	1.3	0.0%	0.2%	0.3%	0.9%	11%	202
- As of depreciation 1)	133%	616	0%	4%	10%	32%	..	202
<u>Limits (IL/MVE) by ownership type</u>								
- Family	1.9%	2.6	0.0%	0.3%	0.7%	2.8%	11%	49
- State	1.0%	1.4	0.0%	0.2%	0.4%	1.4%	8%	43
- Other	2.0%	3.2	0.1%	0.4%	0.6%	1.8%	13%	25
- Widely held	1.5%	3.1	0.0%	0.2%	0.5%	1.1%	20%	85

1) One of the companies had minimal reported sales as the value of the company arises from non-consolidated holdings, which distorts the averages and maximums for sales and depreciation

Table 3 presents the correlation matrix between variables. State-controlled companies are on average larger in size (0.322), more capital intensive (measured as depreciation, 0.301). Power distance is negatively related to Independence and positively to CEO and COB duality. State-dominated companies meet more often (0.232), as do larger companies or companies with more independent members (0.180)

Table 3 Correlations between variables

This table reports the correlations between model variables. Significance at the 5% level is denoted by \* and 1% by \*\*.

	2	3	4	5	6	7	8	9	10	11	12	13
Inv. Lim. per MVE (1)	-0.016	0.080	0.061	-0.106	0.066	-0.082	0.231**	-0.079	-0.083	0.140*	0.117	0.205**
Voting rights (2)		0.482**	0.190**	0.224**	-0.435**	0.037	0.088	-0.167*	0.000	0.084	0.105	0.136
Family (3)			-0.213**	-0.294**	-0.195**	0.040	0.164**	-0.034	-0.142*	-0.110	-0.060	0.121
State (4)				-0.195**	-0.188**	0.073	0.029	-0.134	0.232**	0.301**	0.322**	0.195**
Other (5)					-0.149**	-0.200	-0.035	-0.134	0.045	-0.001	0.074	0.048
Independent (6)						0.048	-0.111	-0.157*	0.180*	-0.030	-0.020	-0.247**
Female (7)							-0.010	0.067	-0.032	-0.026	0.105	0.052
CEO COB (8)								-0.064	-0.073	-0.054	0.056	0.314**
Management (9)									0.060	-0.009	-0.302**	-0.152*
Meetings (10)										0.191**	0.258**	0.066
Depreciation (11)											0.113	0.089
Size (12)												0.215**
Power distance (13)												

## 5. Analysis and discussion

The first hypothesis concerned the influence of ownership on board decision control. The basic assumption was that ownership dominance is related to higher management decision rights as dominant owners can exert control over management directly, bypassing the board. However, tests provided no support to the hypothesis, as concentration of voting rights was not connected to ownership rights, ( $t = -0.225$ ). The test was repeated using dividend rights instead of voting rights but this did not change the results.

In addition, the relationship of type of dominant owner was also tested by including family-controlled, state-controlled and companies controlled by other clearly identifiable owner in the model. None of the tests related to type of owner provided any support to the first hypothesis (FAMILY,  $t = 0.768$ , STATE,  $t = 0.426$ , OTHER,  $t = -0.417$ ). Thus, based on the ownership-related tests, no support for hypothesis 1 was found, and a conclusion can be made that ownership dominance has no material impact on how the boards define the boundaries of power with the management. This result is related to the horizontal agency problem (Shliefer and Vishny 1997), indicating that boards in the largest companies in Europe provide a reasonable protection against excessive powers of large shareholders in corporate decision-making.

The second main hypothesis concerned the characteristics of the board. It was assumed that board characteristics are relevant to the way they act. This hypothesis was tested using two indicators, INDEPENDENCE and FEMALE, the latter representing the diversity of board structure. A significant positive relationship was found between INDEPENDENCE and the dependent variable ( $t = 2.157$ ), indicating that more independent boards allow large freedom of action to the management. This may be due to information gap between external board members and the management. In line with Harris and Raviv (2010) it may be sensible for independent members to allocate more decision rights and leave immaterial or operative decisions to better informed management.

FEMALE as an indicator of diversity was weakly negatively related to decision rights ( $t = -1.778$ ), which may be connected to Nielsen and Huse's (2010) findings that the more different female directors values are from those of male directors, the more influence they have on board decision-making. This study does not investigate director values, but considering the strong male dominance of European boards, these results at least indicate that proportion of female directors is related to how boards act by limiting freedom of action of male-dominated managements.

Meeting frequency provided an additional test regarding board decision control and demonstrated that the more active the board is the tighter the controls over management. The test results were significant on 5% level ( $t = -2.369$ ). With cross-sectional data no claims on causality can be made; if boards meet frequently as a consequence of low limits for decision control, or if active boards consider that their duty of representation requires such nuanced control. The result can be considered logical, active boards are more informed and thus have a stronger role in decision-making.

Management influence was tested through the dual role of CEO and chairman. As expected the top executive in the board increased management powers, reflecting smaller information gap and higher trust between board and the management ( $t = 2.460$ ). This result can also be interpreted as existence of vertical agency problem, CEO influence reducing board decision control. However, proportion of operative directors in the board had no similar influence ( $t = 0.588$ ), which is interesting, as vertical agency problems in decision control seems to be primarily related to



CEO/COB duality rather than management representation in board. Additionally, if same person acts in leadership role for both operative management as well as the infrequently meeting board, the functioning of the two teams must differ. If boards led by CEO were to exercise tight decision control, would that change the role of board into de-facto management. It is evident that duality of leadership poses questions of authority and control that other directors need to tackle in order to remain relevant representatives of shareholder interests.

Control variables provided expected results. It was assumed that the larger the company the more difficult it is for the board to have the necessary knowledge to make business decisions. Using natural logarithm of balance sheet as a proxy, size had a weak positive connection to decision control ( $t = 1.652$ ). This also may reflect information gap, as matters to be decided in very large companies become so diverse that board knowledge is not sufficient for operative decisions, leaving only procedural tasks for the directors. From shareholder representation perspective this raises a concern if very big companies have become too large to govern, and if boards in such companies are unable to represent shareholder interests. Real power may have moved deeper into the organization.

The second company-specific control variable was amount of depreciation as a percentage of sales. Basic assumption was that investment decisions as the proxy for decision control would be larger in companies with plenty of fixed assets and thus higher investment needs. Relationship was positive as expected and strongly significant ( $t = 2.210$ ).

Finally, the impact of culture was tested by using one of the key Hofstede values, POWER DISTANCE. Although this indicator has clear theoretical and practical weaknesses (see McSweeney 2002<sup>1</sup>), it proved to be significant on 5 % level ( $t = 2.179$ ) and robust to variations in the model. We can question why international companies with international managements, international boards and international owners would be impacted by cultural factors related to its country of listing, but the results indicate that the remaining national links are relevant, and the wider the power distance in the country of listing the more power the management has. Only 23 % of

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<sup>1</sup> McSweeney basically says that it is not plausible to argue that nation-states have cultures, considering e.g. the heterogeneity of people living in any territory forming a country

European board members were of different nationality than their company, which may explain the strong cultural affiliation. On the other hand, an alternative test was made by analyzing if UK companies would behave differently from their continental counterparties, as UK is usually considered closest to US and furthest away from European governance. Such tests provided inconclusive, indicating that culture is a better indicator of behavioral differences in Europe than nationality, which has been commonly used as an independent variable in governance studies (see e.g. LaPorta et al. 1998).

Table 3 Regression results

OLS regression results for the investment limit as a proportion of market value of equity as the dependent variable, companies excluding financial sector (N=202). T-values are shown in brackets below co-efficients, \*, \*\* and \*\*\* denote significance at 10%, 5 % and 1% level.

Variable	Coefficient/(t-value)
Intercept	-0.042 (-1.645)
PCT of voting rights	-0.003 (-0.255)
Family	0.005 (0.768)
State	0.003 (0.426)
Other	-0.003 (-0.417)
PCT Independent	0.023** (2.157)
PCT Female	-0.029* (-1.778)
PCT CEO_COB	0.080** (2.460)
PCT Management	0.008 (0.588)
Number of meetings	-0.002** (-2.369)
Ln of BS in Euros	0.002* (1.652)
Depreciation PCT	0.065** (2.210)
Power distance	0.001** (2.179)
Observations	202
Adjusted $R^2$	0.106

In order to test the robustness of test results, numerous other analysis were run specifically regarding board variables and control variables. Diversity of boards was investigated through various measures, either considering gender and nationality separately or as a combined variable. Besides CEO/COB duality, share or management members in boards was also tested. Also, in addition to power distance, other Hofstede cultural variables were also used as independent variables. Finally, in order to further test the robustness of the results, the limitations related to financial sector were released, either including all such companies or continuing the exclude only banks from the sample. The results of additional tests were in line with the main results, although generally on a lower level of significance, and thus they have not been separately reported.

There are limitations to the test results. The dependent variable was defined as a percentage of market value of equity. It is not known how such limits are determined, if boards use due consideration in determining them, or if other methods have been used. Anyhow, considering the wide variance in limits set, it seems evident that boards have used their own judgment and deliberately determined such limits. Thus decision limits can be considered as a reliable proxy for division of process power between boards and managements. Another limitation is related to the cross-sectional nature of data, which prohibits any claims on causality. Repeating this study in a few years could provide insight on the dynamism of power relationships within companies. Additionally, even if most of the coding was quite clear (e.g. foreign or female board members), categories may include very different types of owners or board members, and it is by no means evident that e.g. all family-controlled companies would behave in a similar way, neither that widely held companies are similar to each other.

Final limitation arises from the geographical sample. As empirical material consists of large European companies, the results may not be universal. For example, several studies indicate that ownership concentration is higher in continental Europe than in US or UK, although extant research provides conflicting results. Becht and Mayer (2001) find out that 50 % of the continental European companies have a dominant shareholder, while the same relationship in US and UK is only 3 %, but Holderness (2009) argues that ownership structures are more similar across the Atlantic than previously thought, as large block-holders control on average 39 % of his

sample of large publicly listed US firms. Anderson, Mansi and Reeb (2003) find that one third of S&P 500 companies have a founding family as a significant owner, with an average stake of 19 %, which is comparable to the 22 % family dominance in the comparable Europe-level EuroSTOXX 600 sample. Based on limited sampling, disclosure of board rules is less frequent in US than in Europe, but it would be interesting to test the validity of the results in US circumstances.

## **6. Conclusions**

Board rules have been neglected as a source of information in corporate governance research, even though they provide fruitful insights on how boards act. This may, at least partly, have been due to availability of information, which has improved especially in Europe, where more than half of large listed companies today voluntarily disclose the matters under board decision control. Board rules give factual information on the depth and width of the matters boards consider so material that they, as representatives of shareholders, wish to retain decision control rights.

In order to investigate the division of power between directors and management, a corporate power function was defined. It was argued that total power in corporations consists of shareholder powers, which are fixed in the short term, a combination of board and management powers, the formal split of which is determined by board rules, power of external actors and unknowns. In order to operationalize the core research questions related to division of process power between board and management, investment limits as a proportion of market value of equity were used as a proxy of decision rights.

A unique database on board rules of 600 largest European companies by market capitalization was collected as the basis of empirical analysis. The results indicate that the classical horizontal agency problem between dominant and minority shareholders is quite irrelevant to the way boards exert decision control, highlighting the need to see board as an independent actor with a distinct role in corporate governance. Neither voting rights nor

type of dominant owners had any impact on how powers are split between board and management. On the other hand, evidence on remaining vertical agency was found, as the duality of CEO/Chairman of the Board roles was connected to reduced board powers. In additional tests, independent boards proved to be less stringent controllers of management, which can be seen either as a proof of relevance of information gap in decision-making or independence leading to more efficient decision-making structures, directors being able to concentrate on most material issues. Statistically significant evidence was also found for a negative connection between number of board meetings and management decision rights.

This study has practical relevance for regulators, shareholders and boards. Lack of evidence on horizontal agency problem supports current regulation as an effective means of mitigating excessive dominant owner influence. On the other hand, CEO/COB duality was connected with more limited board decision control, and if regulators wish to ensure that vertical agency problem does not negatively impact board's powers as representatives of shareholders, combination of these two roles is problematic. Finally, empirical results on decision control provide understanding for current and future boards on the relevance of their internal rules, and as they have largely been omitted in extant research, this information will provide material for further studies attempting to penetrate the acts and processes of governance

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## **Essay 4**

### **Corporate governance in financial distress**

- **Board decision rules and the third agency problem**

An earlier version of this paper was presented in Accounting Doctoral Tutorial, 21-22 August 2014, Sannäs, Finland

## **Abstract**

Creditors have no formal role in corporate governance, but they have major influence in situations of distress. Distress is an abnormal situation where creditor governance replaces standard shareholder-centered governance and where classical relationships between shareholders, board and management no longer hold. Creditor governance is a means of solving conflict of interest between holders of debt and holders of equity. This is what governance theory understands as the third agency problem.

This paper focuses on what happens to governance in the gray area when distress is evident but formal power still remains in the hands of corporate bodies. Creditor interests replace owner interests in a stepwise manner as their risk increases in proportion to total enterprise value. This has implications to the intermediate role of the board in the corporate governance triangle between shareholders and management. In simple terms, boards become representatives of creditors instead of owners, if they restrict the acts of management in order to protect creditors from risk of moral hazard.

Key words: Third agency problem, incomplete contracting, creditor governance, financial distress

## 1. Introduction

Classical literature on corporate governance focuses on vertical and horizontal agency problems, the issues between owners and managers (Jensen and Meckling 1976) or between large and small shareholders (Shleifer and Vishny 1997). However, law and economy literature identifies also a third one, between the company and its debt holders, or between shareholders and “non-shareholders such as bondholders, labor, other creditors and even the state” (Hopt 2011). The widely quoted definition of corporate governance by Shleifer and Vishny (1997) states that governance is a mechanism that “deals with the ways in which suppliers of finance to corporations assure themselves of getting a return on their investment”. Even though the definition includes both equity owners and creditors, corporate governance literature has overwhelmingly focused on the first (Roberts and Sufi 2009b). However, in situations of distress, economic risk shifts from the owners to creditors, leading to revolutions in roles of governance, changing who is principal and who acts as an agent. Creditor governance appears when decision control shifts from the corporate bodies to debtholders, whereas in stages of normalcy, power lies in the hands of shareholders, board and management.

Legalistic view on governance dominates the research on creditor governance. Most of the literature considers creditor influence as starting from default (Nini, Smith, & Sufi, 2012). However, there are actually three formal waypoints: covenant violations, restructuring and bankruptcy, each having distinct features that influence corporate governance. In addition to legalistic view, decision control can also be seen from an economic viewpoint, highlighting the transfer of real power and not only formal power. Rational economic actors don't react just on legal events, their acts can rather be seen as a continuum of stages from normalcy to bankruptcy, where they consider potential future stages and react accordingly.

Theory of creditor governance is based on financial contracting theory, or more specifically, theory of incomplete contracts (see eg. Tirole 1999 or Grossman & Hart, 1983). Incomplete contracting theory shares the basis

with agency theory, seeing contracts as a means of controlling the agency problem between creditors and owners. Jensen and Meckling (1976) saw creditors rather as allies to owners, debt providing additional control over management, as repayments and interest reduced management ability to use corporate resources for private benefit. However, the two theories seem to lead to opposite conclusions, if financial contracts are a means to solve conflicts of interests between shareholders and creditors (Smith and Warren 1979), or if they are a means to help owners by providing an essentially free controlling service against usury by management (Jensen and Meckling 1976).

From theoretical point of view an interesting and partly neglected question is how transfer in power takes place and how it manifests itself in corporate governance. The transfer of decision control is not clear cut. There is a grey area where owner-dominated and creditor-dominated governance overlap (Nini, Smith and Sufi 2012). Gray area is relevant for governance as companies have an interest to react to distress already in anticipation of covenant violations, preventing them from falling under creditor control. This gray area is the subject of this study.

The empirical part of this paper studies the connection between corporate decision control and financial distress. It is based on 600 largest European companies by market capitalization and combines financial data on distress with governance attributes and decision rules. The basic assumption is that the way decision rights are divided between the board and the management provides us information on decision control, and decision control is the key to understanding governance, how boards and managements interact in order to represent the interests of shareholders, or in situations of distress, the interests of creditors.

The theoretical contribution of this article relates both to corporate governance as well as to financial contracting theory. It argues that creditor control impacts governance in several steps as level of distress in a company increases. Financial distress also impacts the roles of corporate actors, changing the role of the board from representatives of owners to creditor representatives. Potential moral hazard by the owners is mitigated by acts of board, limiting management decision rights in the interests of creditors.

Basically in distress, creditors become principals instead of owners, ensuring that board decision control is serving the largest financial interest.

The empirical results show that management decision rights increase when shareholders' part of enterprise value decreases, indicating a problem of moral hazard, assuming that higher limits are connected with increased risk-taking. In the case the value of ownership is small, an increasing part of potential losses from risk decisions belongs to creditors while all benefits accrue to shareholders. Although the evidence is not very strong, empirical analysis also provides support for the change of directors' role from representatives of shareholders to representatives of creditors, however on a very high level of financial distress. Lack of stronger evidence may be due to the quality of sample companies, consisting of 600 most valuable companies in Europe, all of them having high market value of equity.

This paper does not take a stand on preferences for governance structure in companies under distress. There seems to be little academic literature focusing on this problem and no coherent view has emerged on what changes to governance should be made in such situations (Fich and Slezak 2008). Anyhow, results of this study can be used both by practitioners as well as standard-setters to further consider the role of creditors in corporate governance.

## **2. Corporate governance, creditors and incomplete contracting**

In this chapter, we discuss the key concepts of creditor's role in corporate governance, financial distress, financial contracting, and covenants. However, prior to that we need to start with a description of board decision rules – what they are and why they matter.

Corporate governance can be seen as a mechanism of decision control, consisting of formal rules and informal practices that determine how material decisions in a company are made. Law and economics literature focuses predominantly in the formal rules and regulations, and how to prevent governance failures from misbehavior (e.g. Hopt 2011, La Porta et

al. 2000). However, overwhelming majority of governance does not involve such misbehavior but rather consists of daily monitoring and decision-making by the board (Schwartz-Ziv and Weisbach 2013). These are the decisions that lead to execution of strategy, change firm's risk profile and eventually result in returns to its investors.

Decision control has several layers (Aguilera et al. 2008), most general of them provided by the society in legislation, usually called hard law, such as company and security market laws. The next layer consists of stock exchange rules and corporate governance codes, which are de-facto binding to companies and which constitute soft law. The third layer consists of company specific rules, determined by the company itself and tailored to its specific circumstances. Articles of Association define the powers of shareholders, in principle having full control based on ownership rights, but in practice shareholders formally delegate majority of decision powers to board through these Articles. Boards have a specific self-regulating role in governance, as they unilaterally define the rules of decision-making within a company, determining how decision power is divided between board itself and management. Although the responsibility for drafting and/or approving rules is not always explicitly expressed in rules, there was no evidence in any of the material of investigated 600 companies that such rules would be subject to shareholder acceptance or even presentation in shareholder meetings. Rather, several rules included even a specific date when boards had approved them. Even if hard and soft law together with Articles can be seen as the formal basis of governance, board rules actually define the praxis on which most corporate decisions are based. These rules have been largely overlooked in academic literature, even though they provide first-hand information on how boards act.

## **2.1 Creditors in corporate governance**

Creditors are not absent in the classical treatises of corporate governance. Shleifer and Vishny (1997) defined corporate governance as a means for the suppliers of funds to ensure that they get a return on their investment, without explicitly separating equity investors from debt investors. In a less



quoted part of their seminal paper, Jensen and Meckling (1976) define agency costs of debt as opportunity costs due to restrictions on investments set by debtholders, monitoring and bonding costs of bondholders and bankruptcy and reorganization costs. Today, the governance aspect of company-creditor relationship is often called the third agency problem (e.g. Hopt 2011), in addition to the vertical problem between shareholders and managers and horizontal problem between large and small shareholders.

Huse (2007) divides corporate stakeholders into three groups, equity holders, economic stakeholders and environmental stakeholders, arguing that the first group has voting power, second has market power and third political power. However, if we see corporate governance as a mechanism of decision control, ability to influence how material decisions with economic impact within a corporation are made, the boundary becomes more diffuse. Although shareholders have formal power, real power is exercised through their elected representatives, board of directors, and other economic actors may have indirect or even direct power on decision-making due to their economic interest. This paper concerns the specific situation of financial distress, where economic interests of creditors surpass those of shareholders, with consequences on how governance process functions. It is evident that considering incomplete contracting and various innovations in financial instruments, the boundaries of decision-making power are not clear-cut.

Theoretical literature on creditor governance does not seem to be well developed. Much of the literature is empirical, focusing on the role of covenants in regulating the incomplete contracts problem between creditors and a company (see e.g. Nini, Smith and Sufi 2012, Baird and Rasmussen 2006). Most of governance literature is focused on the shareholder perspective, even if other contractual claimants also have financial risk related to the performance of a company. The classical view sees shareholders as residual risk takers, but in effect, considering the hierarchy of claims, in financial distress there are several layers of residual risk takers, and the agency problem changes its form depending on to whom the residual risk has been transferred. This transition of residual risk and how that is reflected in corporate governance, and more specifically in board decision control, is the subject of this paper.

**2.2. Financial distress**

There is little research on governance under distress (Fich and Slezak 2008). In situations of financial health, general governance rules apply and creditors have only potential power, while in distress the normal relations between corporate actors break down and creditor control increasingly takes over other means of corporate governance.

How do we define situation of distress? We can separate at least four different levels, three of which are clearly observable and the fourth (financial weakness) which happens by stealth. The four levels of financial distress can be called financial weakness (Level 1), covenant violation (Level 2), restructuring (Level 3) and bankruptcy (Level 4), each one increasing further the power of creditors. In addition to these stages, we need to remember that creditor governance is an abnormal situation, and most of the time companies are solvent and decision control remains tightly in the hands of corporate bodies<sup>1</sup>.

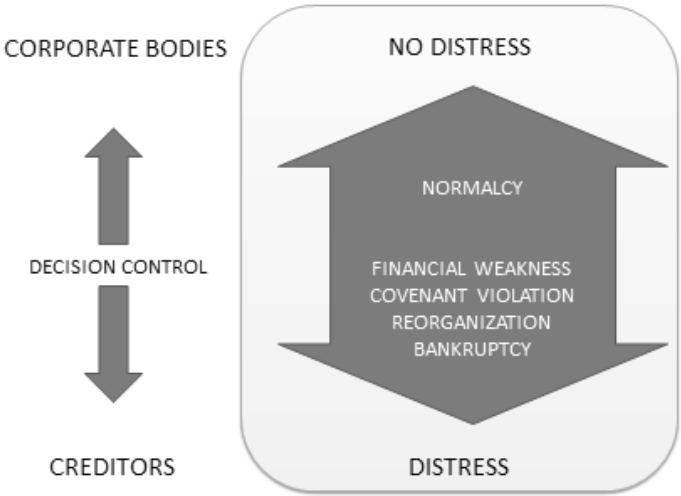


Chart 1      Creditors, level of distress and corporate governance

<sup>1</sup> It also needs to be remembered, that the most simple solution to distress is recapitalization of a company, prior to entering any of the stages of creditor control.

Chart 1 illustrates the relationship between financial distress, creditor governance and decision control. The first level, financial weakness, is most diffuse, as it is impossible to define exactly. It is evident that creditors have implicit influence on corporate decision-making already prior to covenant violations, even if governance is still firmly in hands of corporate bodies. Even though legal restrictions usually prohibit creditors directly influencing corporate decisions, there is at least anecdotal evidence that creditors provide management advice on how to avoid covenant violations or what should be done to receive a waiver after violations have taken place (Baird and Rasmussen 2006, Day and Taylor 1998). Nini, Smith and Sufi (2012) note the same issue “the nature of behind-the-scenes negotiations makes it difficult to document the informal role of creditors on corporate governance”. Potential threat of creditor governance impacts the way board, management and shareholders act, and creates situations where classical relationships in governance change. The phenomenon how decision control moves from corporate bodies to creditors is the main focus of this study.

The first formal point leading to changes in decision control is covenant violation (Nini, Smith and Sufi 2012), which provides creditors several alternatives, most drastic being acceleration of loan repayment, although more common are renegotiating of terms of contract by enforcing restrictions on corporate decision-making or requiring a higher return to creditors as a compensation of increased risk<sup>1</sup> (Roberts and Sufi 2009c). This renegotiation process is related to incomplete contracting theory, to which we return later.

Prior to bankruptcy, companies usually need to pass another milestone. A standard legal procedure either leading to or preventing bankruptcy is restructuring, in US commonly called Chapter 11. The general intent of restructuring is to allow viable companies survive, although outcomes for owners and various classes of debt holders may be drastic. Even if

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<sup>1</sup> This is naturally a simplification of the complexities of real situations, where details of contracting may create complex and controversial negotiations over their interpretation. A separate question excluded from this article concerns the ability of the company to influence their financial reporting in a way that covenant violations can be hidden or at least postponed.

restructuring usually involves court-appointed specialists, de-facto control is in the hands of debtor in possession lenders<sup>1</sup> (Ayotte and Morrison 2009), usually being the senior (secured) lenders, and the main governance problem becomes actually the one between senior and junior creditors, as they may have different interests if companies should be liquidated or allowed to be restructured.

For situations of distress, the most dramatic event concerns bankruptcy, a situation where borrower is unable to pay his debts and creditors use their rights to take possession and liquidate company assets. Early literature on creditor role on governance (see e.g. Hart and Moore 1988) considered normalcy and bankruptcy almost as the only two alternatives of owner and creditor governance, with little attention to creditor influence between these two stages.

### **2.3. Financial contracting**

Jensen and Meckling (1976) are usually credited with defining a firm as “a nexus of contracts”, but interestingly enough, formal contract have little role determining the relationships between owners and board and between board and management. The first is based on unilateral delegation of decision rights to board, which act as shareholders’ representative, and the second primarily on rules of the board in which board one-sidedly determines which powers it retains and which it delegates to management, actual employment contract focusing on compensation and incentives . On the other hand, creditor rights are not based on representation and delegation but rather on a contract between the company and creditors.

Financial contracting theory, in simplified terms, can be described “as the theory on what kinds of deals are made between financiers and those who need financing” (Hart 2001). This view basically excludes shareholding, in which return is based on residual rights rather than contracting. A core characteristic of financial contracting theory is that contracts are bound to

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<sup>1</sup> DIP (Debtor in possession) lenders have the first right to company assets, either as they are financing the restructuring or company assets are pledged as their collateral.

be incomplete (Grossman and Hart 1986, Hart and Moore 1988), as future stages are impossible to forecast *ex ante* at the moment of writing a contract. An essential element of any financial contract is a mechanism of how to react to unexpected outcomes, either by renegotiation or by using the powers granted by the contract (Armstrong, Guay, and Weber 2010).

Financial contracting theory arises from the same basis as corporate governance theory (Roberts and Sufi 2009b), both assuming a conflict between principals and agents. The self-interested motivational basis of financial contracting theory is strongly influenced by Jensen and Meckling (1976), although stealing and shirking by the management from owners is replaced by stealing by management and owners from creditors<sup>1</sup>. In the subsequent literature, Hart and Moore (1988) considered the clear-cut situation of missed payments as critical moment of change in control<sup>2</sup>, while Aghion and Bolton (1992) included the ability of creditors to influence decision control through contractual means, such as covenants. Only in late 2000's has the picture become more nuanced, with increasing number of studies analyzing creditors' various impacts on corporate governance (Roberts and Sufi 2009b).

Contracts are the basic means for resolving owner/creditor agency problems, although incomplete contracting theory states that it is impossible to write an agreement that covers all potential future stages. Incomplete contracts need to include mechanisms of renegotiation, and ultimately mechanisms for transferring control rights. Tirole (1999) argues that the basis for incomplete contracting is contracting costs, as it would be prohibitively expensive (or practically impossible) to prepare for all future stages. Such changes in circumstances can be caused either by internal or external reasons, acts of management or changes in environment. Literature (see e.g. Smith and Warner 1979, Roberts and Sufi 2009a) usually focuses on internal causes, how to prevent management acting against the interests of creditors, for example by increasing investments or returning capital to

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<sup>1</sup> "The primary conflict of interest in the model is the ability of managers to steal all cash flow with the exception of physical assets. As a result, the only threat the lender has over firm behavior is liquidation following payment default, which lowers future cash flow to the manager" – Hart and Moore (1998).

<sup>2</sup> Ayotte and Morrison (2009) demonstrate that creditors have full decision control in legal restructuring; in their sample of 153 firms, creditors providing debtor in possession (DIP) financing commonly replace key management and set detailed financial and operational restrictions, eliminating any remaining decision control owners or management might have

shareholders and thus changing the split of financial risk between debtholders and owners<sup>1</sup>.

Two core concepts of contracting theory are hidden knowledge and moral hazard (Tirole 1999). Although Tirole defines hidden knowledge as something that appears after contracts have been signed, and which management is aware of but creditors not, it also bears a resemblance to theory of information gap. Information gap assumes that as management has better information on company than creditors, contract must include clauses that compensate for this deficiency. Moral hazard concerns situations where one party, normally the management, acts against the interests of creditors while being fully aware of the negative consequences to their claims.

In order to mitigate the problem of hidden information, creditors may have legal rights to receive preferential information. If we consider debt as financial investment, preferential information disclosure can be seen as an anomaly, conflicting with founding principal of financial markets, equal treatment of investors<sup>2</sup>. For example in US SEC has exempted banks and rating agencies from the regulation FD (Fair Disclosure)<sup>3</sup>, which other actors in financial markets obey. Companies are allowed to disclose banks preferential information, such as budgets, business plans or investment plans, which can include information that is not publicly available (Li, Saunders, and Shao 2014). In principle, this provides creditors additional protection by giving them information advantage over other providers of finance and it has monetary value to them in financial contracting. It can be argued that such exemption is in the interests of a company, by reducing information gap it allows creditors to provide finance on more preferential terms (Doblas-Madrid and Minetti 2013).

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<sup>1</sup> Of course any new decision or new development in the market changes the risk profile of a company. Thus in a dynamic world, complete contracting is a practical impossibility.

<sup>2</sup> Recent examples of limiting the rights of large investors requiring preferential information from equity analysts (<http://www.nytimes.com/2014/02/26/business/17-brokerage-firms-agree-to-end-analysis-previews.html>), or discussion on miniscule timing differences in information disclosure, or even physical location of computers due to automatic trading all highlight the high level of sophistication market watchdogs exert on market participants in order to ensure their equal treatment, (<http://www.sec.gov/News/Speech/Detail/Speech/1370542004312>).

<sup>3</sup> Rating agency formal exception was removed in 2010, but they still can receive preferential information through confidentiality agreements, in line with banks

From creditor agency perspective, preferential disclosure has also other impacts. Leuz and Verrecchia (2000) argue that the primary role of disclosure is to reduce the cost of capital. In equity markets, the phenomenon is based on adverse selection, as less disclosure weakens the liquidity of shares, leading to lower valuation, and likewise, in credit markets weak disclosure reduces the number of potential financiers for a company<sup>1</sup>.

## **2.4. Covenants**

Existence of covenants is usually explained by agency theory and contracting costs (Taylor 2013). By reducing the freedom of action of the management in situations of distress, covenants mitigate the third agency problem between the company and its debtholders. They can be seen as a mechanism of corporate governance, as a first formal step of shifting formal power from the hands of corporate bodies to creditors (Baird and Rasmussen 2006). Covenants entered accounting literature quite recently, only in 1990's (Roberts and Sufi 2009b), although related literature in finance has existed since Smith & Warner (1979).

In line with incomplete contracting theory, covenants provide the standard mechanism of responding to uncertain stages in the contractual relationship between creditors and a company. Covenants can be split into three categories (Day and Taylor 1998), affirmative (or positive), negative and financial covenants. Affirmative covenants consist of matters like proper legal standing of a company, respect of laws and regulations or reporting timelines. Negative covenants ensure the identity of the company by limiting structural changes such as acquisitions or divestments that may change the credit profile of the company. Compliance with positive and negative covenants is within the authority of a company, as they can only be broken through acts and agreements that can be controlled by the company.

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<sup>1</sup> Consider the role of road shows, presenting the investment case to a large number of equity or debt investors. Such presentations are not only marketing, but they also represent attempts of reducing the information gap by improving disclosure to a large number of potential providers of finance.

The third category of covenants, financial covenants are economically most significant, attempting to solve the problem of incomplete contracts. For creditors, financial covenants limit uncertainty regarding uncontrollable future stages (Day and Taylor 1998, Nini, Smith and Sufi 2012). From the company perspective, financial covenants always include an element of risk as outcomes of external events and internal business decisions may cause unanticipated transfer of control rights to creditors.

Violation of covenants may lead to several alternative outcomes, the most drastic being acceleration, i.e. immediate requirement of repayment of debts subject to violation. The other options are based on renegotiation, which can lead both to higher interest costs as well as increased restrictions to company's freedom of action, transferring a part of decision control to debtors. Such restrictions may be soft, consisting of more frequent and deeper monitoring, or hard, consisting of limits of investments, dividends or other material decisions (Roberts and Sufi 2009a, Day and Taylor 1998). Common consequences of covenant violations can be considered to be against the interests of shareholders (e.g. dividend restrictions), boards (e.g. reduced decision control) and management (e.g. increased frequency of CEO change).

Empirical literature on debt covenants can be divided first into US and non-US covenants and secondarily into public and private debt covenants (Taylor, 2013)<sup>1</sup>. Although technical definitions seem to differ across countries, most common financial covenants are related either to balance sheet strength, such as gearing, or cash flow, such as Net Debt to EBITDA (Moir and Sudarsanam 2007). What is striking in the literature surveyed by Taylor (2013) is the focus on accounting based information and negligence of market based data, an anomaly to which Myers paid attention already in 1977.

Debt holders' possibility for exit is different from equity-holders. Selling shares is basically always possible for an owner of a publicly listed firm, market liquidity allowing. Refusing to renew debt or use covenants for accelerated repayment is one-sided action, which does not require a buyer for the debt. It is way more forceful as a means to influence the management

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<sup>1</sup> This paper assumes that national differences in loan documentation are not material for very large European companies relying on international banks in their lending.



than the exit of a single shareholder, considering also that such action usually provides equal rights to all creditors<sup>1</sup>.

Using a large US dataset, Nini, Smith and Sufi (2012) show that covenant violations lead to clear decrease in firm risk, improved profitability and increase in CEO turnover. The investment levels and acquisition activity decline materially after credit events, proving that the decision power had drifted to debt providers. As Chava and Roberts (2008) note, consequences of covenant violations are not necessary bad for the shareholders. Indeed, Nini, Smith and Sufi also show that immediately following covenant violation, cash flow improved and costs declined in comparison to period prior to violation. This can be interpreted as a remedy to failure of normal governance, creditor imposed governance compensating for the inadequacies of management and board decision control.

What is a proper usage of covenants? Christensen and Nikolaev (2012) find support for variations in covenant use related to conditions in financial markets, use of capital covenants decreasing during 1996 to 2007 but re-increasing during the financial crisis of 2008-2010, which may reflect the fluctuation of relative power of debtholders, ability to enforce tighter covenants during economic downturns. It is evident that some covenants are not properly designed at the optimum where creditors should have formal decision control. In case thresholds are too high, covenants may lead to decreased investment and other risk-taking, leading to indirect wealth loss to shareholders. On the other hand, in case their levels are too low, they bypass the critical point where creditor risk exceeds ownership interest. Considering the conservative nature of banking, the first risk seems more likely.

From finance theory we know that going concern value of a company is normally higher than its liquidation value. This creates creditors an incentive to act prior to liquidation of assets, to retain maximum value for debtholders. There is a point of discontinuity, where creditors can, in order to protect their investment, sell the assets at liquidation value, even if going

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<sup>1</sup> *Pari passu* and cross default clauses in credit agreements are intended to guarantee equal treatment of all creditors even in situations where some creditors may have better terms or preferential information over other creditors

concern would provide more value to other parties in company's financing structure.

A classical question of finance theory is why firms do not borrow as much as they can (Myers 1977). While Modigliani and Miller showed that the value of the company, in simplified circumstances, is independent of its financing structure (see e.g. Tirole 2006), the return to shareholders is not. Due to the leverage effect of debt (and including its tax shield), as long as the return on assets exceeds debt costs, it is normally beneficial for shareholders to increase debt in proportion to equity<sup>1</sup>. When going concern value of the equity in a corporation is very low, it is rational for the owners to increase the risk asymptotically as all income from successful risk-taking belongs to them, while most costs of failure fall on the debt-holders. This question is the essence of creditor governance, how to limit the potential moral hazard of owners.

The outcomes from covenant violation are potentially so drastic that rational corporate bodies react already to a threat thereof. Nini, Smith and Sufi (2012) discuss creditor influence in the murky area around covenant violations, and argue that creditors provide active "behind the scenes" advice to companies approaching distress. Anecdotal evidence of informal influence can also be found in Day and Taylor (1998) and Baird and Rasmussen (2006). Additionally, Roberts and Sufi (2009b) find that 90 % of loans are renegotiated prior to their maturity, and that renegotiation is based rather on change in business plans or external environment than financial distress, highlighting the versatile relationship between companies and their creditors. Renegotiation process essentially provides a mark-to-market valuation method for private corporate debt.

However, if creditors have no formal means of enforcing their views on corporates in the gray area of financial distress, how can we observe it and prove its existence? In the empirical part of this paper, data on management decision limits is analyzed in order to find out if boards increase decision control as financial distress increases, influencing corporate decisions to the benefit of creditor interests.

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<sup>1</sup> Myers (1977) discusses practical reasons, such as firms retaining borrowing capacity, management protecting their jobs from excessive risk taking or wealth loss caused by suboptimal investment policy under restrictions set by providers of risky debt.

### **3. Creditors and corporate governance**

In this chapter, we define a model of creditor governance in financial distress. It is self-evident that when firms default, decision control shifts from owners to creditors, and management decision rights are severely curtailed. However, the change from owner-centered to creditor governance includes several steps that have unique governance characteristics and where the roles of various actors may change. There are several interesting phenomena that require further understanding. First is how risk profiles of various actors impact corporate governance and second is the changing role of the board. Additionally, we can ask, in line with financial contracting theory, “at what precise moment do creditors exercise control?” (Roberts and Sufi 2009a).

In an antecedent to this study, Nini Smith and Sufi (2012) illustrate the changes in governance through a simple chart, through which they illustrate the difference between the classical view, where default defines the critical point between creditor and shareholder interests, and more nuanced view which includes a gray area of mixed influence where total firm value exceeds def

ault value but the company is still under distress. Similarly, Dichev and Skinner (2002) note “that private lenders set debt covenants tightly and use them as ‘trip wires’ for borrowers, that technical violations occur relatively often, and that violations are not necessarily associated with financial distress.”

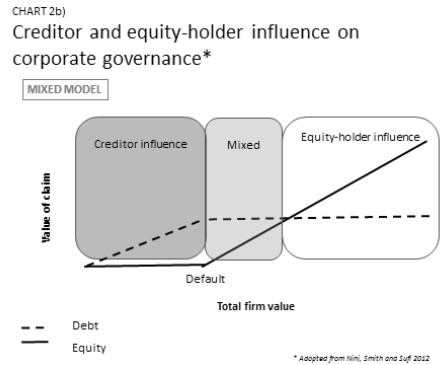
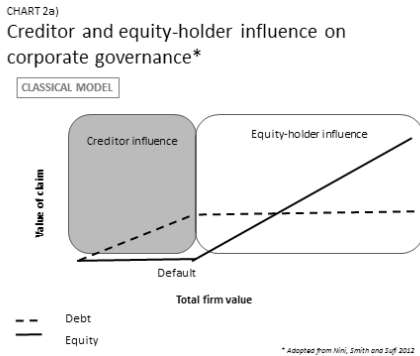


Chart 2 Nini-Smith-Sufi model of creditor influence on governance

In order to develop further the Nini Smith and Sufi model, we can analyze the interests of various actors with a somewhat unconventional definition of enterprise value that separates senior (secured) creditors from junior (unsecured) creditors<sup>1</sup>. Let's assume the following:

$$TEV = MVE + D_s + D_j \text{ where}^2$$

$$TEV = \text{Total enterprise value}$$

$$MVE = \text{Market value of equity}$$

$$D_s = \text{value of secured debt}$$

$$D_j = \text{value of unsecured debt}$$

and we can further define four different points on the total enterprise value (TEV) line of values

$$TEV_{GOC} = \text{Total enterprise value as a going concern}$$

$$TEV_{FID} = \text{Total enterprise value where a threat of creditor influence on decision control impacts corporate decision control, but where a company is still in compliance with its financial covenants (FID = Financial distress)}$$

<sup>1</sup> There is actually a third class of creditors which usually is forgotten in financial literature – trade and other non-interest bearing creditors. However, their position is similar to junior creditors, so  $D_j$  can be considered to include also trade creditors

<sup>2</sup> Normally  $TEV = MVE + IBD$ , where IBD (Interest bearing debt) excludes trade and other non-interest bearing creditors

$TEV_{COV}$  = covenant (COV) value of the enterprise, which for simplicity is defined as a point in where market value of debt is 100 % and  $MVE$  is clearly higher than zero, but where a financial covenant is violated <sup>1</sup>

$TEV_{LIQ}$  = Total enterprise value in liquidation (LIQ)

There are at least three basic game-theoretic situations that influence corporate governance<sup>2</sup>:

First, the situation where  $TEV_{GOC} > TEV_{FID}$  represents normality in governance, where standard theory applies, decision control is within corporate bodies and shareholders, board and management each have a clearly defined role. This is the area what most studies in corporate governance focus on.

Second, the situation where  $TEV_{COV} < TEV_{GOC} < TEV_{FID}$  represents the gray area of creditor governance, where creditor interests influence corporate decision control and impact the principal-agent role of the board, but where formal power still lies in the hands of the board.

Third, the situation where  $TEV_{GOC} < TEV_{COV}$ , which means that the company is in violation of its credit covenants, and which has further five basic variations

- a)  $TEV_{GOC} > TEV_{LIQ} > D_s$  i.e. both the going concern value of the company and the liquidation value are above secured lenders' claims, restricting their interest of accelerating debt repayment and potentially pushing the company into liquidation.
- b)  $TEV_{GOC} < TEV_{LIQ} > D_s$  i.e. senior creditors are still able to recover all of their claim, but continuing business will reduce its

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<sup>1</sup> In practice financial covenants use accounting values rather than market values, even if from theoretical perspectives market values would be more relevant

<sup>2</sup> In real life, the situation are naturally more complicated, as the position of other parties, such as employees and tax authorities may be preferential, depending on legislation

value, endangering the future recovery of  $D_s$ . It would be rational for senior creditors to accelerate the loans, causing losses to junior creditors.

- c)  $TEV_{LIQ} < D_s$  but  $TEV_{GOC} > D_s$ , i.e. the situation where if the company were liquidated, secured lenders would suffer losses, but in case company continues operating, its value would still remain above security value. This situation still allows for renegotiation, but creates a need for intensive monitoring by creditors
- d)  $TEV_{LIQ} < D_s$ , and  $TEV_{GOC} < D_s$ , but  $TEV_{GOC} > TEV_{LIQ}$ , i.e. senior creditors will suffer a loss in any case, but it is still rational for them to continue the business as it may provide them with higher value than liquidation
- e)  $TEV_{LIQ} > TEV_{GOC}$ , otherwise as in d), which means that it is rational for senior creditors to liquidate the assets of the company, in order to restrict further future losses.

In order to further illustrate the issues related to corporate governance, Nini Smith and Sufi (2012) chart can be redrawn to include a key governance indicator, decision control within a firm, creating a model that combines financial contracting theory with corporate governance. In this model, the horizontal axis is basically the same as in Nini, Smith and Sufi, although it is expressed differently, as the relationship of market value of equity to total enterprise value (MVE/TEV). MVE/TEV as a market based measurement does not seem to appear in prior governance literature, although it is useful in analyzing the differing interests of shareholders and creditors specifically in situations of financial distress. For example, in case market value of equity is only a small fraction of book value of equity, ownership approaches option value and creditors become de-facto residual risk takers in any major risk decision while benefits accrue to shareholders. An additional benefit for this definition is that we can widen the gray area between shareholder and creditor governance and make it more nuanced for our analysis, as

MVE/TEV indicates financial distress already prior to violation of covenants. In comparison to accounting-based covenants, such as gearing or equity ratio, which may provide misleading information of the risk position of shareholders and creditors, market based indicator is always up-to-date with investor assessment of the future cash-generating ability of a company<sup>1</sup>.

Chart 3 illustrates the relationship of management risk authority and total enterprise value. On the X-axis is total enterprise value, which is a sum of total debt and market value of equity. This can also be seen to represent the proportion of total enterprise value held by shareholders (MVE/TEV), as market value of equity decreases in line with total enterprise value, assuming debt remains constant, and actually becomes negative when nominal value of debt is larger than remaining enterprise value<sup>2</sup>. On the Y-axis is the management risk authority defined as the decision limit for investments delegated by the board to the management. Total enterprise value is divided into four segments, normality, where firm is healthy and creditors have no influence on decision rights, a stage of financial distress where covenants are not broken but where decision rights start to decline as creditor interests increasingly are considered in company risk decisions, area where financial covenants are broken but company is still solvent, where creditors have a major influence on risk decisions, and finally, area where firm goes in reorganization or bankruptcy.

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<sup>1</sup> There are numerous financial indicators for the probability of default, most famous being Altman's Z-score, which is a combination of various indicators of financial weakness (Altman 2000). An interesting variable was created by (Cao et al. 2013), which they call "distance to default", where they attempt to combine market-based variables (market value of equity) with accounting variables (dividends). The risk indicator (EV/MVE) used in this study can be considered a simplified version of Cao et al (2013) "distance to default".

<sup>2</sup> This can also be explained as a situation where market value of debt is below its book value, and where creditor risk becomes ownership risk as any changes in total enterprise value are directly reflected in the value of debt.

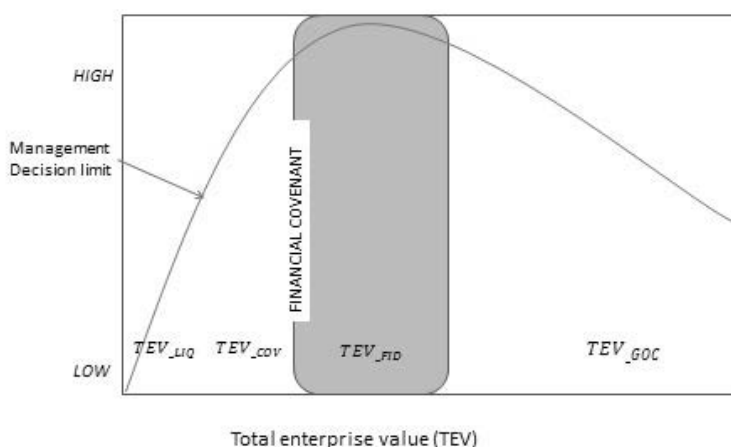


Chart 3 Management decision rights in different stages of distress

The shape in Chart 3 is humped due to various influences. First, the chart rises from right to left reflecting a positive relationship between increased market-based gearing and management decision rights. This can be due to several factors. From governance perspective, it is assumed that high MVE/TEV is associated with low decision authority for the management, as lower leverage indicates limited risk preference of shareholders. On the other hand, when MVE/TEV becomes low, a large proportion of the financial risk is transferred to creditors, as probability that an uncertain stage in the future will lead to a credit event increases. Consequently, such values should be associated with higher risk limits, reflecting moral hazard of shareholders as higher risk leads to increased volatility of earnings, the option type benefits of which belong to shareholders while losses fall on creditors.

Thus we can present our first hypothesis:

H1: Decision power of the management is negatively related to shareholders' share of total enterprise value

However, the gray area is what happens in financial distress. At certain point in the continuum of split of enterprise value between owners and creditors, boards increasingly consider the interests of creditors and start to restrict the freedom of management. This may not be in the interests of



shareholders, for whom it might be rational to increase risk asymptotically as market value of equity approaches zero and the ownership has only option value. In such a situation, upside from risk decisions belongs to owners but downside to creditors, which may create a situation of moral hazard.

In chart 4, we further illustrate risk profiles of creditors and owners. For the sake of simplicity, a company is assumed to represent only shareholder interests, an assumption that will be released later. Thus chart 4 demonstrates the agency problem between creditors and owners, which is the core of financial contracting theory. Dotted line represents the risk preference of owners, which evidently is very flat and declining while the firm is financially healthy, as strong balance sheet, here understood as market value based gearing, represents a low appetite for risk. On the other hand, dotted line starts to rise asymptotically as we get closer to market value approaching zero, where balance of financial risk changes from owners to creditors, representing a situation of moral hazard. From creditors' perspective (constant line), the stronger the company the more risk appetite creditors have, and in the right hand side of the chart creditor risk appetite exceeds owners' risk appetite. However, the crossing of the two lines, where owners risk appetite falls under creditors' risk appetite, is the point where financial covenants ideally should be placed.

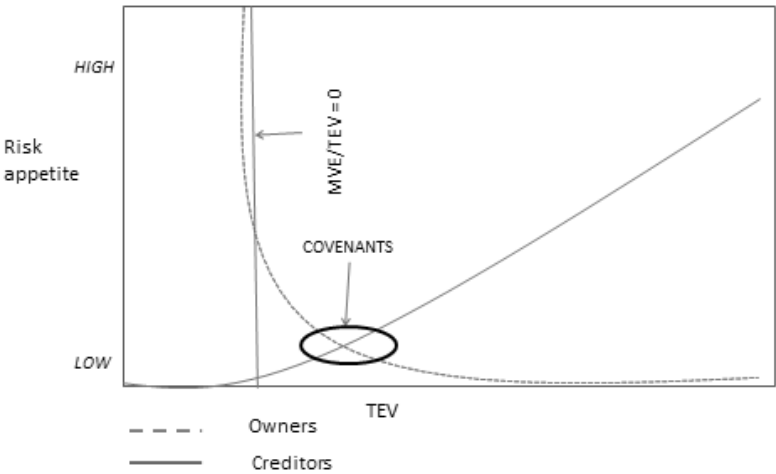


Chart 4 Risk profiles of owners and creditors

Combining the risk preferences and decision rights we get our second hypothesis:

H2: Power of management is curtailed at a level where the risk preference of creditors falls below the risk preference of owners

There are several studies documenting creditor influence on decision control already prior to bankruptcy. Chava and Roberts (2008) and Nini, Smith and Sufi (2012) find that firms' investments are reduced after covenant violations, under the threat of acceleration of debt payments. Nini et al. (2009) find that covenant violations often lead to reduced dividends to shareholders and explicit investment restrictions in credit agreements. Covenant violations have also a contracting cost element. Roberts and Sufi (2009b) show that violations lead to reduced access to credit markets and increases in interest costs.

Covenants provide the first shift in formal power, but we need to remember that not all credit agreements are optimal. Creditors may receive effective decision rights too early, curtailing risk decisions while they still may be in shareholder interests without hurting creditor rights. Nini, Smith and Sufi (2012) find out that at least in American environment, financial covenants are set at a level where companies still are in a reasonable health "The median firm in our sample that is a first-time covenant violator has a market-to-book ratio above one, positive operating cash flow, and enough liquidity to easily cover their current liabilities" The rationale for the debt-holders to require financial covenants on levels where there is substantial shareholder value remaining may be the same as the interests of blockholders. In the case a blockholder attempts to sell its share, it may result in decline in value of its holdings, and similarly in case a single debt-holder requires for early repayment of her debts due to covenant violation, this normally leads to cross default, acceleration of all debts. Cross default is a standard clause in credit agreements, protecting individual creditors from preferential treatment of other creditors which may have been able to negotiate tighter covenants or other credit terms. In simple terms, cross default allows all creditors to require repayment if any one of them has

received that right. Evidently, cross default clauses increase creditor influence, as the outcome of breakage of a single covenant can be drastic for the total external financing of a company.

Next we can turn to the relationship of governance characteristics and creditor control. First, there is evidence of weak governance being related to bankruptcy. Daily and Dalton (1994) observe a connection between insider influence and bankruptcy, duality of management structures and insider directorships being more frequent with bankrupt firms than with surviving firms. Fich and Slezak (2008), also analyzing governance attributes and bankruptcy, finding that non-independent directors and large boards are associated with likelihood of bankruptcy.

Several papers study the relationship of governance characteristics and covenant violations. Chava and Robers (2009) and Chava, Kumar and Warge (2010) find that relatively more severe agency problems are related to limited shareholder rights or management entrenchment reduces the trust of creditors in situations of distress, leading to harsher restrictions on investments. Day, Mather, and Taylor (2011) study the relationship of board characteristics and creditor monitoring. They find that creditor monitoring is negatively related to board independence and financial expertise, but positively related to blockholder presence in board.

Cao et al (2013) study the impact of governance structures on default risk, and find that smaller boards reduce default risk after regulatory failures in reporting. They consider this to be an outcome of reduced information asymmetry in comparison to larger boards. Additionally, they find both board independence as well as gender diversity as factors reducing credit risk. All of these can be considered trust enhancing measures, and thus they should also be visible in the material on decision control.

A corollary to research on distress can be found in studies on credit pricing. Armstrong et al. (2010) provide a survey of studies that find a link between board independence, accounting and auditor quality, and cost of debt. Bhojraj and Sengupta (2003) find higher ratings and lower yields for firms with greater board independence and institutional ownership. Lower cost of debt reflects the amount of trust creditors have on board's monitoring ability, and independent boards should thus allow for higher decision rights for management.

So we can establish two more hypotheses related to governance characteristics and creditor governance:

H3: Increased board independence and monitoring is associated with creditor trust, and thus higher management risk limits

H4: Duality of leadership is positively associated with management risk limits

In addition, there are two control variables. It is assumed that the activity of board is negatively related to decision limits as active directors have more resources to control management decisions than passive directors. Secondly, it is assumed that size of the company is positively associated with risk limits, larger companies delegating more powers to management than smaller firms.

Now we can turn the hypotheses into an empirical model to be tested:

$$P_M = \beta + x_1 \text{ OWNER VALUE} + x_2 \text{ DISTRESS} + x_3 \text{ OWNER VALUE} \\ * \text{ DISTRESS} + x_4 \text{ BOARD CHARACTERISTICS} \\ + x_5 \text{ OWNERSHIP} + x_6 \text{ CONTROL VARIABLES} + \epsilon$$

Where

$P_M$  Power of management, measured as natural logarithm of delegated investment decision rights

*OWNER VALUE* is a proxy of shareholders' relative economic interest. It is calculated as a proportion of Market Value of Equity (MVE) to Total Enterprise Value (TEV), where  $TEV = MVE + \text{net interest bearing debt}$ <sup>1</sup>

*DISTRESS* This is a dummy factor that represents a threshold that changes ownership based governance to creditor governance. It receives a value of 1 in case financial risk to creditors is high, otherwise zero. NET DEBT to EBITDA is used as a proxy of

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<sup>1</sup> This definition works in reverse to normal measures of leverage. A high MVE/TEV reflects a situation of low creditor risk as most of enterprise value is with shareholders and a low MVE/TEV represents a situation of distress, where most of enterprise value consists of debt

financial risk, and various values between 3 and 10 are tested as thresholds of high risk

*OWNER \* DISTRESS* is an interaction variable between *OWNER VALUE* AND *DISTRESS*, representing the situations where shareholders’ economic interest is low and creditor risk is high, leading to reversal of board role from representatives of shareholders to representatives of creditors.

<i>BOARD CHARACTERISTICS</i>	include the following variables:
- <i>INDEPENDENCE</i>	Percentage of independent members in board.
- <i>FEMALE</i>	Percentage of female board members
- <i>BOARD MEETINGS</i>	Number of annual meetings of the board
- <i>CEO/COB</i>	Dual CEO and chairman of the board, as a percentage of board members
<i>DOMINANCE</i>	Share of voting right held by the largest shareholder
<i>SIZE</i>	Natural logarithm of sales

**4. Data, analysis and discussion**

Data for the analysis comes from several sources. The empirical material consist of 600 largest European companies by market capitalization, which formed EuroSTOXX 600 as of 25.7.2012. There are pros and cons related to this material. First, due to the large size of the companies, the amount and quality of their disclosure is high. 325 (54 %) of the companies disclosed their board rules, and 244 (76%) of those included numerical investment limits for board decision control. The sample is wide enough to include 17 industries and 15 countries, so it provides a representative sample of European corporate sector. However, the data has also limitations. The sample consists of companies with high market valuations, thus generally the firms are in good shape and relatively few companies are in financial

distress. The full database also includes 109 (18%) companies from the financial sector (banks, insurance companies, financial services), which are difficult to compare, and thus they were excluded from the analysis, leaving a final sample of 202 non-financial companies that had disclosed numerical authorized investment limits for management.

Financial material is from ORBIS database, and it has been collected for the year that ends on or between 31.12.2011 and 30.12.2012. Relevant currency conversions were made at the foreign exchange rates current at the date of financial reporting. Data on ownership and board structure was hand collected either from the latest annual report for the same period, or supplemented by additional information provided on company website. Information on management decision rights was collected from company disclosures on board rules or other similar documents<sup>1</sup>

#### 4.1. Descriptive statistics

Table 1 provides the definitions for the variables. The distress variables were tested on several levels, so the table provides only an example of their definition.

Table 1	Variable definitions
Variable	Definition
Ln inv lim (1)	Natural logarithm of investment decision limit delegated by the board to the management, converted into EUR
PCT of voting rights (2)	Per cent of voting rights of the largest shareholder
MVE/TEV (3)	Relationship of market value of equity to total capitalization, TEV is calculated as a sum of market value of equity and net interest bearing debts as of the latest reporting date

<sup>1</sup> Matters Reserved to the Board, Board rules, Board charter or other explicit disclosure, such as Document de Référence

Distress (4)	Dummy variable for companies which have a high net debt to EBITDA for the latest financial year
MVE/EV * Distress (5)	Interaction variable, calculated as 3 * 4
Number of meetings (6)	Number of board meetings during last financial year
PCTIndependent (7)	Percentage of board members independent both from the company and largest shareholders
CEO_COB (8)	CEO's having simultaneously also the role of Chairman of the Board, as a percentage of board members
Ln_sales_EUR (9)	Natural logarithm of company sales, converted into EUR

Natural logarithm of investment authority delegated by board to management under written board rules (Ln inv lim) is the dependent variable in the model<sup>1</sup> representing the risk to creditors on a company. The basic assumption is that decision limits provide a signal to management of a preferred risk level, as determined by the board. The rationale of using management decision rights as a proxy for governance is manifold. First, board is considered to be instrument of representation for the shareholders, ensuring alignment of interests of management and shareholders. Decision control is they key mechanism of governance, as other acts boards consider important (choosing a CEO, determining strategy) actually take place very seldom, so the boundary between board decision control and management decision rights defines day-to-day governance.

Table 2 presents the industry and country breakdown of the sample. Frequency of disclosure varies somewhat between countries, France and Italy having the highest disclosure rate while the Nordic countries have the lowest. 42 % of the companies can be considered widely held, with an institutional shareholder as the largest shareholder, usually with an ownership share of less than 10 %. Based on the recent evidence (Holderness 2007) this is not very much different from US, even if traditionally ownership concentration has been considered higher in Europe than on the other side of Atlantic. This study takes a different view from the law and economics literature (LaPorta et al 2008), which considers countries as important variables. Considering the free movement of capital

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<sup>1</sup> In case several investment limits have been defined, the lowest has been used. In a few cases where boards have determined a separate acquisition limit but no investment limit, acquisition limit has been used.

and de-facto harmonization of regulation, there are strong reasons to consider European Economic Area as one investment market for large listed companies.

Table 2 Breakdown of finals sample by industry and by country (N=202)

Countries are BE = Belgium, CH = Switzerland, DE = Germany, DK = Denmark, ES = Spain, FI = Finland, FR = France, GB = Great Britain, IE = Ireland, IT = Italy, LU = Luxembourg, NL = Netherlands, NO = Norway, PT = Portugal, SE = Sweden

Industry	Country														
	BE	CH	DE	DK	ES	FI	FR	GB	IE	IT	LU	NL	NO	PT	SE
Automobiles & parts			2				3			2					7
Basic resources							1	7					1		10
Chemicals	2	2	4				2	2				2	1		15
Construction & materials		3					4		1						10
Food & beverages	1	1	1				3	2		1		3			12
Healthcare	1	4		1			3	2							12
Industrial goods and services		4	5		1	1	10	9		3		7			41
Media							4	4		1	1	1			12
Oil & gas					1		3			2		2	1	1	10
Personal & household goods		1	3				2	2		2					11
Real estate	1	2	1				4	3				2			14
Retail		1					3	3				1		1	9
Technology		1	1				6	1		1					10
Telecommunications	1	1					1	2		1		1			7
Travel and leisure							3	6							9
Utilities			2		2		4	1		4					13
N	6	20	19	1	4	1	56	44	1	17	1	19	3	2	202

Table 3 presents the key descriptive statistics of the variables. Median investment limit of sample companies was 29.9 MEUR, minimum being 0.1 MEUR and maximum 3.89 BEUR, naturally reflecting the size of the company. In order to correct for this evident relationship, a natural logarithm of sales is included as a control variable in the empirical model. The median sales were 5.9 billion euros, median market value of equity 5.2 billion and median enterprise value 6.8 billion, representing median EV/Sales valuation of 1.2, which seems realistic for large listed companies.



Table 3 Descriptive statistics

Variable	Mean	Standard Deviation	Minimum	25 %	Median	75 %	Maximum
LN_INV_LIM	3,5	1,768	2,1	2,3	3,4	4,8	8,0
PCT_of_voting_rights	26 %	21 %	2 %	9 %	20 %	36 %	90 %
Number_of_members	11,3	3,6	3,0	9,0	11,0	13,0	22,0
No_of_meetings	8,5	3,1	3,0	6,0	8,0	10,0	22,0
Sales_EUR (MEUR)	15 503	23 859	...	1 846	5 954	17 871	166 728
MVE_EUR (MEUR)	11 917	19 553	821	2 556	5 217	11 574	146 696
EV_EUR (MEUR)	16 154	24 067	670	3 109	6 837	15 392	158 480
INV_LIM_EUR (MEUR)	124,7	301,3	0,1	10,0	29,9	119,7	3088,8
PCTIndependent	60 %	22 %	11 %	44 %	57 %	73 %	100 %
LN_SALES_EUR (Millions)	15,6	1,6	6,9	14,4	15,6	16,7	18,9
MVE/TEV	0,781	0,246	0,103	0,631	0,820	0,943	1,552
NET_DEBT_EBITDA_LAST	1,692	2,847	-11,061	0,309	1,150	2,275	20,408

Table 4 provides the two-tailed Pearson correlations for the variables. Investment limit is positively correlated with sales (0.531), as can be expected. Concentration of ownership is negatively correlated with share of independent directors (-0.435) indicating that widely held companies are more likely to choose independent directors. The interaction variable between distress and MVE/TEV is highly correlated due to the way the variable is calculated. Interestingly, Distress is negatively correlated with size (-0.356), indicating that larger companies are less risky for creditors.

Table 4 Correlations between variables

This table reports the correlations between model variables. Variables are defined in Table 2. Significance at the 5% level is denoted by \* and 1% by \*\*.

	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Ln Inv Limit (1)	0.079	-0.187**	0.067	0.047	-0.019	-0.008	0.209**	0.531**
Voting rights(2)		-0.002	0.055	0.055	0.000	-0.435**	0.088	-0.041
MVE/TEV (3)			-0.236**	-0.192**	-0.224**	0.066	-0.015	-0.102
Distress (4)				0.950**	0.100	-0.045	-0.034	-0.356**
4 * 5 (5)					0.068	-0.042	-0.049	-0.408**
Meetings (6)						0.180*	-0.073	0.217**
Independent (7)							-0.111	0.022
CEO COB (8)								0.087
Size (9)								

### 4.3. Regression results

In order to study the relationship of corporate risk preferences and third agency problem, a model was created in Chapter 3 above, where management decision rights were used as a proxy for the risk profile of a company. It was first assumed that the lower the ownership value in relation to total enterprise value the higher the company risk profile would be, indicating a potential moral hazard problem between owners and creditors. On the other hand, it was assumed that board as an intermediary actor with large delegated authority will restrict risk-taking for the benefit of creditors when company is in financial distress, protecting their own reputation and effectively changing their role from representatives of shareholders to representatives of creditors, increasingly considering creditor claims over shareholder value. Additional assumptions were made of the relevance of board characteristics impacting company risk-taking.

Table 4 presents the results of regression tests. The test were run on three different levels of complexity. Model one includes only the distress variables and size as control variable. The second model includes also ownership concentration and the third model adds also board characteristics into the model. Although the signs of relationships between independent and dependent variable remain the same through variations of the model, only inclusion of both ownership variables and board variables provided significant results and thus it can be concluded that the impact of distress on governance cannot be understood separately from ownership and board characteristics. The outcomes of the third model are discussed next.

The relationship between relative ownership value (MVE/TEV) and risk-taking was negative and significant on 10 % level, supporting the assumption of first hypothesis. Thus boards allow for higher risk taking by the management while financial risk of economic outcomes increasingly shifts from owners to creditors, indicating a potential moral hazard problem. The second hypothesis stated that directors will increasingly consider their own reputation when firm is under financial distress and start to restrict management decision rights protect the company from bankruptcy and thus benefiting also creditors. This hypothesis received limited support from the tests, which showed that the combined effect of lower MVE/TEV and

financial distress lead to reversal of decision rights, in line with the humped structure illustrated in Chart 3. The interaction variable was significant on 10 % level ( $t = 1.803$ ). However, this result needs to be interpreted with caution, as the tests were run on various levels of distress, measured as net debt to EBITDA, and the results became significant only for companies exceeding a multiple of 9, which can be considered very high. This may be explained by the high quality of sample companies, consisting of 202 of the 600 largest companies in Europe by market capitalization, the market value of each being high. Moir and Sudarnasam (2007) found that large companies have less covenant restrictions than smaller companies, so our sample may include abnormally few situations of creditor governance. Also, the number of companies fulfilling the distress criterion was low, only 16 of the 202 companies, reducing the reliability of the results. It is evident that more tests with an increasingly varied company sample is needed before stronger conclusions can be made.

The variables related to board characteristics provided results in line with hypotheses three and four. The proportion of independent directors was positively associated with risk limits ( $t = 1.764$ ), supporting the assumption that independence allows for higher risks, independent directors providing additional comfort for the creditors. The duality of leadership was strongly and positively related to risk limits ( $t = 2.724$ ), which may be problematic to creditors as concentration of powers in single hands reduces the ability of directors controlling top management.

Table 4

## Regression results

OLS regression results for the natural logarithm of investment limit as the dependent variable, companies excluding financial sector (N=202). T-values are shown in brackets below co-efficients. \*, \*\* and \*\*\* denote significance at 10%, 5 % and 1% level.

	Model 1	Model 2	Model 3
Intercept	-7.298*** (-6.050)	-7.523*** (-6.216)	-7.767*** (-6.452)
Pct of voting rights		0.751 (1.583)	1.034** (2.054)
MVE/TEV (Risk split)	-0.467 (-1.092)	-0.472 (-1.106)	-0.778* (-1.887)
Distress (Net debt / EBITDA >9)	-0.151 (-0.079)	-0.195 (-0.102)	0.111 (0.061)
MVE/TEV * Distress	6.824* (1.667)	6.821* (1.673)	6.978* (1.803)
Independent			0.877* (1.764)
CEO_COB			4.427*** (2.724)
Number of meetings			-0.127*** (-3.868)
Size (Ln of Sales)	0.711*** (10.191)	0.713*** (10.260)	0.762*** (11.186)
			(-2.369)
Observations	202	202	202
Adjusted R <sup>2</sup>	0.357	0.361	0.423

The two control variables, number of meetings and company size both provided expected results. A more active board has a strong negative association with risk limits ( $t = -3.868$ ), which seems natural as more meeting time allows for smaller decisions to be brought to boardroom. Of course the relationship may also be inverse, lower limits requiring more board meetings as there is more to decide. This may be not only an indication of active boards being tighter monitors, but it may also indicate increased monitoring in situations of distress, which is in line with the second hypothesis. In addition, the relationship between company size and decision limits was positive as expected and very strong ( $t = 11.186$ ), boards in larger companies delegating bigger decisions to management than their peers in smaller firms.

### 4.3 Discussion of results

The role of creditors in theories of corporate governance is not very well defined. Although classical treatises note a potential agency problem between a company and its creditors, most of the literature focuses on the

issues related to shareholder primacy. The fundamental right for shareholders to receive a higher compensation is based on their higher risk as residual risk takers in a company after all contractual commitments have been fulfilled.

However, the situation is not clear-cut, as the role of residual risk-taker changes in situations of distress. Formal power may still lay in the hands of corporate bodies, while the majority of financial risk is transferred to creditors, which creates a need for creditor influence in corporate governance. There are formal steps, such as covenant violations, re-organization and bankruptcy that effectively give creditors formal decision-making powers, but their real powers arise already prior to that. Board of directors has a special role in this transfer of real powers, as shareholders' interests may lead to a situation of moral hazard, benefits of increasing risk belonging to them but losses from failures falling on creditors as new residual risk takers. In this situation, the role of board increasingly is based on stakeholder approach, directors representing the interests of largest residual claimants, even if they have been elected by shareholders. The analysis of how boards allocate decision rights to management in various stages of financial distress provides us novel information on changing role of the board.

We started our discussion by questioning why management decision limits would have anything to do with creditor governance. In the analysis above, a clear relationship between decision control and risk split between shareholders and creditors was found, indicating owners' moral hazard in situations where a major part of negative outcomes of risk decisions fall on creditors while benefits accrue to shareholders. Owners have an interest to increase risk asymptotically when their ownership value approaches option value, in line with Chart 4 above. On the other hand, creditors have the interest of reducing company risk-taking when owner interests are small, creating a rationale of financial covenants restricting company decision-making powers in situations approaching distress. The hypothesis of the role of board received only limited support, although there is no reason to reject the hypothesis that director interests in situations of distress change them from representatives of shareholders to representatives of creditors. It was argued that this change takes place by stealth, directors having the interests to consider creditor interests already prior to formal power shifting

to creditors through covenant violations of even more severe situations of distress. As a conclusion, boards with a role distinct from shareholders and management can be seen as a partial solution to the third agency problem between creditors and the company.

The results also support the findings of Armstrong et al (2010), who argue that outside directors have reputational capital to lose, which aligns their interests with creditors in situations of distress. Carcello and Neal (2003) provide further indirect evidence of changing nature of directors by showing that independent directors support independent audit, even when it is detrimental to shareholders and beneficial to creditors.

From creditor perspective, requirement of independent majorities is a two-edged sword. On the one hand, independent directors reduce the ability of dominant shareholders to make excessive risk decisions, but on the other hand independent directors allow for higher risk-taking, potentially leading to increased credit risks. The duality of leadership increased the risk limits, which may also be a problem for creditors, as plenty of powers are in the hands of a single individual.

Concepts like financial distress and decision control both imply a restriction, a potential to pull rather than push. Anyhow, it is actually difficult to determine if the limits have only a pull impact, or if boards can use them to push management for more active risk taking. Basically this means that we cannot for certain determine the causality between risk taking and decision limits, if limits provide management with an ex ante signal of preferred risk levels, or are limits driven by management, and board intervenes only if ex post outcomes are not acceptable.

## **5. Conclusions**

This paper started by defining the core concepts related to the third agency problem between creditors and a company, financial distress, financial contracting, and covenants. It was shown that various stages of distress lead to different game-theoretic outcomes, each having implications for corporate governance. It was also noted that the two alternative approaches

to creditor governance, financial contracting theory and agency theory have compatible behavioral assumptions and thus form a coherent basis for research.

A model combining decision control and split of financial risk was built to study the relationship of governance and financial distress. The results based on a sample of 202 of the 600 largest European companies by market capitalization were in line with the main hypotheses, showing the connection of governance and creditor control. Increased management decision rights were associated with higher proportion of creditor risk until a critical level was reached, where limited support was found for the hypothesis boards turning into representatives of creditors and restricting management actions so that they would not contribute to potential moral hazard of owners. Additionally, it was shown that board characteristics had expected influence on decision control, independence and leadership duality allowing for higher limits, although reasons were interpreted to be different, while more active boards were associated with tighter decision control.

From theoretical perspective, this paper combines agency-based governance theory with financial contracting theory, or more specifically incomplete contracting theory. It showed that legalistic view on creditor control needs to be supplemented with economic view, which considers behavioral motivation of various actors in governance. In financial distress creditor control arrives by stealth, through anticipation of what needs to be done in order to avoid negative consequences of creditor control.

Financial distress changes the basic setup of agency relationships in governance. Most important is the potential changing role of the board, from representatives of shareholders to representatives of creditors, limiting the acts of management unfavorable to creditors. Board decision control can limit the potential moral hazard by the owners, whose self-interest would motivate to increase firm risk asymptotically in case their share of market-based enterprise value becomes low. This study leaves it open for future research how governance should be organized in situations of distress. It is anyhow evident, that one of the primary outcomes of creditor control is board and creditor co-operation, in order to find ways for companies to survive, even though that may lead to decisions which are not in the interests of shareholders.

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